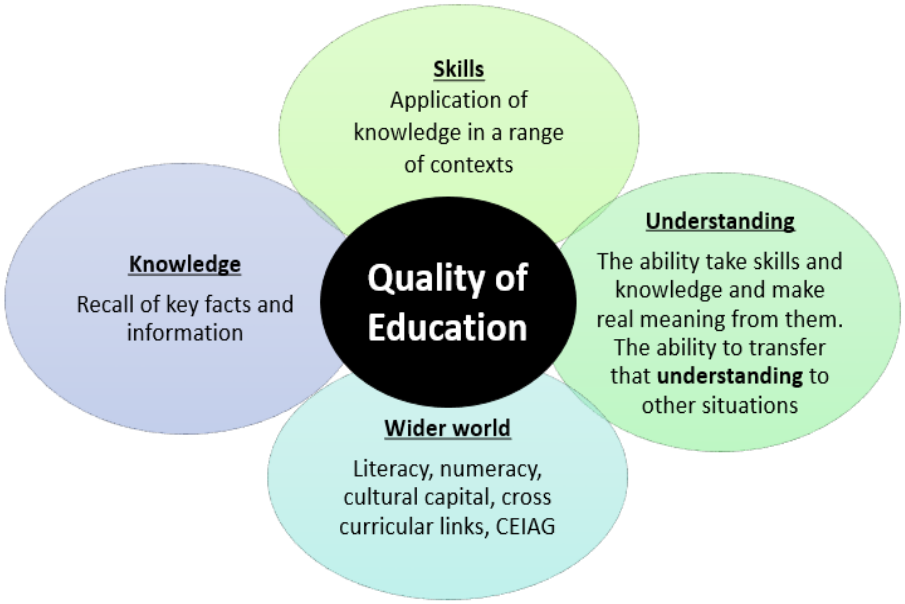
CIM - Curriculum Intent Map Computer Science

Exam boards - KS4: OCR GCSE J277 & OCR Cambridge National iMedia J834. KS5: OCR A Level H446 & V Level Digital*

Curriculum objectives

The OCR GCSE and A-level in Computer Science is for learners that want to aquire a wealth of knowledge in the fundamentals that make computers and networks operate as well as develop programming skills in an industry standard programming language. Alongside GCSE and A-level Computer Science, the department also offers the OCR Cambridge National in Creative iMedia (J834) as a KS4 option and V Level Digital as a KS5 option, broadening the digital pathways available to students.



Curriculum values and context

This qualification appreciates the importance of learning both skills and knowledge that contribute towards a growing industry of which our lives are becoming ever more dependent on. Students are not only learning valuable information to carry them forward to potential careers in computer science, but also becoming more informed on how the technology functions in the world around them.

Knowledge and understanding being developed

The OCR GCSE and A-level in Computer Science will encourage students to:

- Understand and apply the fundamental principles of and concepts of computer science including abstraction, decomposition, logic, algorithms, and data representation
- Analyse problems in computational terms through practical experience of solving such problems, including designing, writing and debugging programs
- Think creatively, innovatively, analytically, logically and critically
- Understand the components that make up digital systems, and how they communicate with one another and with other systems
- Understand the impacts of digital technology to the individual and to wider society
- Apply mathematical skills relevant to Computer Science.
- Apply practical programming skills to develop code that solves computational problems through the use of the Python programming language.

This GCSE and A-level compliments the learning in the maths GCSE and A-level programme. This is due to the fact that problems solvable by computational methods require logical approaches in the same way that maths problems do.

Curriculum sequencing and structure

The GCSE qualification aims to meet the following objectives:

Paper 1 – Computer systems:

- Written paper – 1 hour 30 minutes
- 50% of total GCSE
- 80 marks

Extracurricular activities **Careers links** **Curriculum links** **Threshold topics (bold)** **PSHE, PD and cultural capital links**

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- Non calculator paper
- Paper consists of multiple choice questions, short response questions and extended response questions.

Content of Paper 1:

- Systems architecture
- Memory and storage
- Computer networks, connections and protocols.
- Network security
- Systems software
- Ethical, legal, cultural and environmental impacts of digital technology

Paper 2 – Computational thinking, algorithms and programming:

- Written paper – 1 hour 30 minutes
- 50% of total GCSE
- 80 marks
- Non calculator paper
- This paper has 2 sections. Section A and section B.
- In section B, students must showcase their ability to write or refine algorithms using Python or a language they are familiar with.

Content of Paper 2:

- Algorithms
- Programming fundamentals
- 3 Producing robust programs
- Boolean logic
- Programming languages and Integrated Development Environment

The A-level qualification aims to meet the following objectives:

Paper 1 – Computer systems:

- Written paper – 2 hour 30 minutes
- 40% of total A-level
- 140 marks
- Non calculator paper

Content of Paper 1:

- The characteristics of contemporary processors, input, output and storage devices
- Software and software development

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- Exchanging data
- Data types, data structures and algorithms
- Legal, moral, cultural and ethical issues

Paper 2 – Algorithms and programming:

- Written paper – 2 hour 30 minutes
- 40% of total A-level
- 140 marks
- Non calculator paper

Content of Paper 2:

- Elements of computational thinking
- Problem solving and programming
- Algorithms to solve problems and standard algorithms

Programming project

- Non-exam assessment
- 20% of total A-level
- 70 marks

Content of programming project:

The learner will choose a computing problem to work through according to the guidance in the specification.

- Analysis of the problem
- Design of the solution
- Developing the solution
- Evaluation

Cambridge National Creative iMedia (J834) qualification structure

The Cambridge National in Creative iMedia aims to meet the following objectives:

Unit R093 - Creative iMedia in the media industry:

- Written examination - 1 hour
- 40% of total qualification (70 marks)

Content of R093:

- Media sectors and products
- Job roles within the media industry
- Media codes and conventions
- Legal and ethical issues in the media industry

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- Pre-production planning documents

Unit R094 - Visual identity and digital graphics (non-exam assessment):

- Centre-assessed, OCR-moderated coursework
- 25% of total qualification (50 marks)

Content of R094:

- Principles of visual identity
- Creating original digital graphics for a client brief
- Reviewing and improving digital graphics against requirements

Optional unit, e.g. R096 Animation and Audio or R095 Characters and Comics:

- Centre-assessed, OCR-moderated coursework
- 35% of total qualification

V Level Digital qualification structure

V Level Digital is a new Level 3 Technical qualification announced by the Department for Education, with first teaching planned from September 2027. The outline below reflects currently published headline information and will be finalised once the full specification is released.
The V Level Digital aims to meet the following objectives:

Examined component:

- Approximately 40% of total qualification
- Covers digital systems, data literacy and designing digital solutions

Non-exam assessment - employer-set project:

- Approximately 60% of total qualification
- Applies knowledge and skills to a substantial practical digital project set by an employer

Development of students cultural capital, FBV's and personal development

Study of the qualification will help learners to make more informed choices for further learning, either generally or in this sector. The choices that learners can make post-16 will depend on their overall level of attainment and their performance in the qualification. Learners who generally achieve a grade 5 across their Key Stage 4 learning might consider progression to:

- A levels as preparation for entry to higher education in a range of subjects such as a computer science, networking or software development degree.
- Enter employment or an apprenticeship.

Additionally, students develop values aligned with Fundamental British Values (FBVs) by focusing on personal management, communication, legal and ethical considerations, and promoting mutual respect and tolerance. Overall, this qualification equips students with valuable skills, knowledge, and attitudes for future endeavours while fostering responsible citizenship within British society.

Curriculum equality and access

All assessments are administered carefully to ensure that all learners are treated fairly.

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All learners have equitable opportunity to access the qualification and assessments, and that the qualification is awarded in a way that is fair to every learner. All learners achieve the recognition they deserve for undertaking a qualification and that this achievement can be compared fairly to the achievement of their peers.

Meeting the needs of SEND students within the classroom

Intent:

- Identification of key fundamental building blocks based on student need

Implementation:

- Knowledge of SEND need - knowing who they are, targeted T&L and classroom strategies to meet need.
- Staff trained to meet needs of SEND students specifically to their subject area
- Differentiated teaching and resources based on identified needs
- Targeted live marking and questioning
- Deploying TA's (where available) to support wider group to allow subject specialist support for SEND (helicopter approach)
- Personalised home learning
- Access arrangements – identification and application
- **Impact:**
- Grading below Grade 1 to monitor progress
- Structured accessible assessments.

	Knowledge	Skills	Understanding	Wider world
Year 13	1.1.1 Structure and function of the processor 1.1.2 Types of processor 1.1.3 Input, output and storage 1.2.1 Systems Software 1.2.2 Applications Generation 1.2.3 Software Development 1.2.4 Types of Programming Language 1.3.1 Compression, Encryption and Hashing 1.3.2 Databases 1.3.3 Networks 1.3.4 Web Technologies 1.4.1 Data Types 1.4.2 Data Structures 1.4.3 Boolean Algebra	• Python programming skills are further developed through the development of the programming project • Planning techniques are studied, developed and then applied to the project-based coursework • Application of previously studied software development methodologies through programming project. • Application of software development testing methods to find problems and debug them.	• Recognising the advancements and impact of modern technologies on individuals, society, and various sectors. • Understanding the wider implications of digital systems in terms of societal, ethical, and economic aspects. • Developing advanced planning and communication skills for digital system implementation. • Applying data-related skills to handle and process information effectively. • Recognising the significance of data quality in decision-making and problem-solving.	• Careers; • Software developer • Network manager • Cyber security • Hacker (white hat) • Data analyst • Improvement of programming skills (In Python). Skills can be used across the development of any software whether it be websites, application or video games. • Awareness of potential security threats to themselves or a business (and how to protect against them). • Awareness of the environmental impact (repair vs. replace) • Awareness of legal and ethical uses

Extracurricular activities **Careers links** **Curriculum links** **Threshold topics (bold)** **PSHE, PD and cultural capital links**

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	1.5.1 Computing related legislation 1.5.2 Moral and ethical Issues 2.1.1 Thinking abstractly 2.1.2 Thinking ahead 2.1.3 Thinking procedurally 2.1.4 Thinking logically 2.1.5 Thinking concurrently 2.2.1 Programming techniques 2.2.2 Computational methods 2.3.1 Algorithms 3.1.1 Problem identification 3.1.2 Stakeholders 3.1.3 Research the problem 3.1.4 Specify the proposed solution 3.2.1 Decompose the problem 3.2.2 Describe the solution 3.2.3 Describe the approach to testing 3.3.1 Iterative development process 3.4.1 Testing to inform evaluation 3.4.2 Success of the solution 3.4.3 Describe the final product 3.4.4 Maintenance and development		• Exploring sectors that heavily rely on data modelling and understanding their applications. • Understanding and mitigating threats to individuals in the digital realm.	of data (including tracking data). • Awareness of individual pieces of computer hardware and its purpose within the machine, giving students foundational knowledge for computer upgrades and repairs. • Understanding of software development and workplace methodologies to equip learners to work in the industry.
Year 12	1.1.1 Structure and function of the processor 1.1.2 Types of processor 1.1.3 Input, output and storage 1.2.1 Systems Software 1.2.2 Applications Generation 1.2.3 Software Development 1.2.4 Types of Programming Language 1.3.1 Compression, Encryption and Hashing 1.3.2 Databases 1.3.3 Networks 1.3.4 Web Technologies 1.4.1 Data Types 1.4.2 Data Structures	• Skills in python programming are developed from scratch. This is done as taking the computer science GCSE is not a requirement to take it at A-level. These skills are developed throughout the year by giving increasingly complex programming task, challenges and projects. • Further from GCSE, students learn to apply multiple libraries of Python programming, increasing the efficiency of their code via object orientated techniques and development of visual rather than text-based methods.	- Recognising the advancements and impact of modern technologies on individuals, society, and various sectors. - Understanding the wider implications of digital systems in terms of societal, ethical, and economic aspects. - Developing advanced planning and communication skills for digital system implementation. - Applying data-related skills to handle and process information effectively. - Recognising the significance of data quality in decision-making and	• Careers; • Software developer • Network manager • Cyber security • Hacker (white hat) • Data analyst • Improvement of programming skills (In Python). Skills can be used across the development of any software whether it be websites, application or video games. • Awareness of potential security threats to themselves or a business (and how to protect against them). • Awareness of the environmental impact (repair vs. replace)

Extracurricular activities **Careers links** **Curriculum links** **Threshold topics (bold)** **PSHE, PD and cultural capital links**

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	1.4.3 Boolean Algebra 1.5.1 Computing related legislation 1.5.2 Moral and ethical Issues 2.1.1 Thinking abstractly 2.1.2 Thinking ahead 2.1.3 Thinking procedurally 2.1.4 Thinking logically 2.1.5 Thinking concurrently 2.2.1 Programming techniques 2.2.2 Computational methods 2.3.1 Algorithms		problem-solving. - Exploring sectors that heavily rely on data modelling and understanding their applications. - Understanding and mitigating threats to individuals in the digital realm.	• Awareness of legal and ethical uses of data (including tracking data). • Awareness of individual pieces of computer hardware and its purpose within the machine, giving students foundational knowledge for computer upgrades and repairs. • Understanding of software development and workplace methodologies to equip learners to work in the industry
Year 11	Binary and hex conversions Threats to computer systems and vulnerabilities	Print (including slicing + concatenation Variables Use of if statements (including arithmetic operators) Use of else Use of elif Use of operators such as MOD, DIV and ^ Improvement of current RAG (different for each student) Use of while loops Use of for loops Use of AND, OR, NOT Lists 2D lists Arrays vs lists Functions and procedures Local vs global variables File handling SQL commands	Recap – CPU architecture Recap – Boolean logic Recap – CPU architecture **Recap – Images, sound and characters** Computational thinking Boolean logic – Term before AND OR NOT programming Designing, creating and refining algorithms – Term before programming project Searching/Sorting algorithms – Can be placed anywhere Data types Languages – Can be placed anywhere 2.5.2 The Integrated Development Environment Defensive design Testing	• Careers; • Software developer • Network manager • Cyber security • Hacker (white hat) • Data analyst • Improvement of programming skills (In Python). Skills can be used across the development of any software whether it be websites, application or video games. • Awareness of potential security threats to themselves or a business (and how to protect against them). • Awareness of the environmental impact (repair vs. replace) • Awareness of legal and ethical uses of data (including tracking data). • Awareness of individual pieces of computer hardware and its purpose within the machine, giving students foundational knowledge for computer upgrades and repairs. • Basic understanding and application of software development to equip students with the foundational knowledge to program software

Extracurricular activities **Careers links** **Curriculum links** **Threshold topics (bold)** **PSHE, PD and cultural capital links**

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				solutions.
Year 10	Operating systems Utility software Networks and topologies Wired, wireless networks, protocols and layers Threats to computer systems and networks Identifying and preventing vulnerabilities The integrated development environment	Arithmetic operators Data types Indexing If statements Loops Indexing Variables Variables If statements Loops Data types Variables Data types User input Selection Iteration Lists + 2D lists Data types User input To imbed learning the project must make use of: • Functions • Lists • File handling	Languages Defining, creating and refining algorithms Recap – Operating systems Recap – Utility software Recap - Networks and topologies Recap - Wired, Wireless networks, protocols and layers	• Careers; • Software developer • Network manager • Cyber security • Hacker (white hat) • Data analyst • Improvement of programming skills (In Python). Skills can be used across the development of any software whether it be websites, application or video games. • Awareness of potential security threats to themselves or a business (and how to protect against them). • Awareness of the environmental impact (repair vs. replace) • Awareness of legal and ethical uses of data (including tracking data). • Awareness of individual pieces of computer hardware and its purpose within the machine, giving students foundational knowledge for computer upgrades and repairs. • Basic understanding and application of software development to equip students with the foundational knowledge to program software solutions.
Year 9	Computational thinking Programming Skills	Defining, creating and refining algorithms Casting/data types i.e. int(input()) Comparison operators Selection	Applying Programming Skills to problems	• Careers; • Software developer • Network manager • Cyber security • Hacker (white hat)

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		Maths with loops - Arithmetic operators Iteration Data types Casting Comparison operators Arithmetic operators Comparison operators Boolean operators Data types If/elif/else - Selection While/for – Iteration All previous skills 2.1.2 Flowcharts/Pseudocode 2.1.2 Structure diagrams Error checking/understanding		• Data analyst • Improvement of programming skills (In Python). Skills can be used across the development of any software whether it be websites, application, or video games. • Awareness of potential security threats to themselves or a business (and how to protect against them). • Awareness of the environmental impact (repair vs. replace) • Awareness of legal and ethical uses of data (including tracking data). • Awareness of individual pieces of computer hardware and its purpose within the machine, giving students foundational knowledge for computer upgrades and repairs. • Basic understanding and application of software development to equip students with the foundational knowledge to program software solutions.
Year 8	Fake News and Information Technology for the environment Being an office worker Graphic designing and ideas	• Researching, evaluating and fact-checking information to make informed decisions online • Using digital technologies to solve problems and address real-world environmental challenges • Developing professional workplace skills through the use of office software, communication and organisation tools • Creating effective visual content by applying	• Understanding how information can be accurate, misleading or biased, and the importance of evaluating sources critically • Understanding how technology can be used to address environmental challenges and support sustainable practices • Understanding workplace expectations, professional communication and the effective use of digital office tools • Understanding how design principles and audience needs influence the creation of effective visual content	• Developing skills relevant to careers in digital media, graphic design, marketing, administration and office management • Exploring roles that use technology to address environmental challenges and promote sustainability • Building transferable skills including communication, creativity, organisation and critical thinking valued by employers • Computing: digital literacy, evaluating information and using a range of software applications • English: researching, analysing

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		graphic design principles and creative thinking		sources and communicating ideas effectively to different audiences • Art and Design: applying design principles, creativity and visual communication techniques • Developing critical awareness of online information, misinformation and digital citizenship • Understanding individual and collective responsibility towards environmental sustainability • Preparing for future education and employment through professional behaviours and workplace skills
Year 7	Digital literacy E-safety Computational Thinking Computer hardware	• Basic computer usage skills such as accessing the internet, creating file hierarchies and using keyboard shortcuts • Applying computational thinking to create solutions to problems both in the digital and real world • Basic application of software development to program their own version of Pacman in Scratch • Basic understanding of using Microsoft Excel features to create spreadsheets from given data sets.	• Knowledge of threats that can be found on the internet, how to avoid them and what to do if you encounter them. • Knowledge of the importance of computer devices in both everyday life and the workplace • Knowledge of a range of computational thinking skills and how they are applied • Knowledge of how everyday software is made and its importance in the current world • Knowledge of the main individual pieces of hardware that make up a computer and their function to provide	• Careers; • Over KS3, the curriculum is designed to gear up and prepare students to use computer technology to a level of which would be expectable within the workplace environment. As IT related subjects become an option beyond KS3, it is essential that students have the experience they need to function computers at a basic level due to its very common requirement in today's jobs. • Skills in problem solving and resilience that can be applied anywhere within the world beyond that of just computing • Skills In computer use that can be applied anywhere in the wider world. This includes but isn't limited to accessing the internet, using search engines efficiently, creating file hierarchies and working

Extracurricular activities **Careers links** **Curriculum links** **Threshold topics (bold)** **PSHE, PD and cultural capital links**

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				collaboratively. • Awareness of the threats that can be found on the internet and how to defend against them when using computers leisurely. • Awareness of how the parts that make a computer run work and what can slow computers down. Giving students understanding of how their actions on their home computer devices can cause lag.

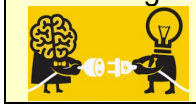
At The Elizabethan Academy we offer a curriculum that:

- is broad, balanced, inspiring and inclusive
- builds confidence, independence and **resilience**
- encourages students to develop the **skills, knowledge and understanding** required to succeed academically
- encourages students to participate in a wide variety of activities which extend beyond the classroom
- places creativity and imagination at the heart of learning to develop enquiring minds
- enables students to understand the connections and links between different subjects
- raises students' aspirations through promoting academic excellence
- develops students' **social and cultural knowledge**, skills and understanding
- develops students' **respect for spiritual and moral values**, and tolerance towards other races, religions and ways of life.
- gives students the opportunities to put theoretical skills into practice and expand their knowledge beyond the exam specification
- prepares students for the world of work in a rapidly changing world.

Extracurricular activities **Careers links** **Curriculum links** **Threshold topics (bold)** **PSHE, PD and cultural capital links**

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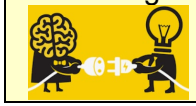
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	Year 7					
	Half term 1	**Half term 2**	**Half term 3**	**Half term 4**	**Half term 5**	**Half term 6**
Knowledge, Skills and Understanding 	• Logging on to the school network and shared drives • File and folder management, naming and saving conventions • Cloud storage - OneDrive and Microsoft Teams • Keyboard shortcuts and touch-typing basics • E-safety recap and acceptable use policy	• Formatting text - fonts, styles and paragraphs • Inserting images, tables, headers and footers • Using templates for letters and posters • Proofing tools - spelling, grammar and thesaurus • Introduction to mail merge	• Navigating browsers safely and efficiently • Effective search strategies and search operators • Evaluating websites for reliability and bias • Bookmarks, browsing history and privacy settings • Referencing and copyright basics	• Planning a presentation - audience and purpose • Building slides that support rather than distract • Verbal delivery - pace, tone and eye contact • Structuring a talk with a clear opening, middle and conclusion • Responding to questions confidently	• Principles of graphic design - layout, colour and typography • Using image editing software to manipulate images • Vector vs bitmap graphics • Planning a digital product using mood boards • Copyright and use of assets	• Combining word processing, web research, oracy and design skills • Planning and time management for an extended project • Presenting and evaluating a finished digital product • Peer and self assessment against a brief
	• Baseline assessment. Multiple choice and short answer questions (Microsoft Forms)	• Skills based assessment. Produce a formatted document from a brief	• Knowledge based assessment (Microsoft Forms - multiple choice and short answers)	• Skills based assessment. Deliver a short presentation to the class	• Skills based assessment. Produce a digital design from a brief	• End of year project assessment. Skills tracker
 **Embed your knowledge**	Starter quizzes recapping keyboard shortcuts and file management	Starter quizzes on formatting terminology	Starter quizzes on searching and evaluating websites	Starter quizzes and peer feedback on oracy skills	Starter quizzes on design terminology	Recap quizzes drawing on the whole year's learning
Extend your learning 	Practise touch-typing using an online typing tutor Organise your own files at home using the same conventions	Recreate a real-world document, such as a newsletter, using the skills learnt	Research a topic of interest and evaluate the reliability of three different sources	Watch and critique a TED talk, identifying effective oracy techniques	Create a mood board for a digital product of your own choice	Extend the project with an additional feature of your own choice

Extracurricular activities **Careers links** **Curriculum links** **Threshold topics (bold)** **PSHE, PD and cultural capital links**

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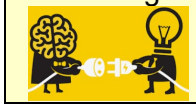
Exam boards - KS4: OCR GCSE J277 & OCR Cambridge National iMedia J834. KS5: OCR A Level H446 & V Level Digital*

	Year 8					
	Half term 1	**Half term 2**	**Half term 3**	**Half term 4**	**Half term 5**	**Half term 6**
Knowledge, Skills and Understanding 	• What is misinformation and disinformation • Techniques used to spread fake news online • Fact-checking strategies and lateral reading • Bias, clickbait and algorithmic filter bubbles • The impact of misinformation on society	• Energy use of data centres and the cloud • E-waste and the lifecycle of digital devices • Repair vs replace - right to repair • Sustainable computing choices • Legislation around electronic waste	• Using spreadsheets for business data - formulas and functions • Formatting data for a business audience • Charts and graphs to present data • Business documents - invoices, letters and reports • Working to a house style	• Introduction to databases - tables, fields and records • Presenting business data effectively • Workplace IT skills - email etiquette and file sharing • Data protection in a business context • Collaborative working using cloud tools	• Identifying a user need and writing a design brief • Researching existing digital products • Wireframing and prototyping a digital product • Iterative design - gathering and acting on feedback	• Developing the digital product from the prototype • Testing the product against the original brief • Evaluating the finished product and suggesting improvements • Presenting the finished product to an audience
	• Knowledge based assessment (Microsoft Forms - multiple choice and short answers)	• Knowledge based assessment (Microsoft Forms - multiple choice and short answers)	• Skills based assessment. Open book spreadsheet task with guided tasks	• Skills based assessment. Open book database task with guided tasks	• Skills based assessment. Design brief and initial prototype	• End of unit assessment. Finished digital product and evaluation. Skills tracker
 **Embed your knowledge**	Starter quizzes on spotting misinformation techniques	Starter quizzes on the environmental impact of technology	Starter quizzes on spreadsheet formulas	Starter quizzes on databases and data protection	Starter quizzes on the design cycle	Starter quizzes recapping the design cycle
Extend your learning 	Fact-check a viral news story and present your findings	Research a company's approach to sustainable technology and evaluate it	Build a budgeting spreadsheet for a fictional small business	Design a simple database for a fictional business and populate it with records	Sketch three alternative designs for your product idea	Redesign your product to meet an additional user need

Extracurricular activities **Careers links** **Curriculum links** **Threshold topics (bold)** **PSHE, PD and cultural capital links**

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	Year 9					
	Python Programming			Graphics Design		
Knowledge, Skills and Understanding 	• Variables and data types • Sequence - writing and running simple programs • Selection - if/elif/else statements • Using an IDE effectively • Debugging simple errors	• Iteration - for and while loops • Lists and simple data structures • String manipulation and slicing • User input and validation • Arithmetic and comparison operators	• Functions and procedures • Planning a solution to a given problem • Building and testing a small programming project • Documenting and evaluating code	• Design principles - layout, colour theory and typography • Researching a target audience • Analysing existing digital products • Using image editing software to create original assets	• Pre-production documents - mood boards and visualisation diagrams • Producing original digital graphics to a brief • Working within legal and ethical constraints, including copyright and licensing • Reviewing work against client requirements	• Evaluating a digital product against a brief • Introduction to the Creative iMedia and Computer Science pathways • Comparing creative and computational approaches to digital problem solving
	• Knowledge based assessment (Microsoft Forms - multiple choice and short answers)	• Skills based assessment. Open book programming task with guided tasks	• End of unit assessment. Programming project and evaluation. Skills tracker	• Knowledge based assessment (Microsoft Forms - multiple choice and short answers)	• Skills based assessment. Open book design task with guided tasks	• End of year assessment. Digital design portfolio. Skills tracker
 **Embed your knowledge**	Starter quizzes on Python syntax and keywords	Starter quizzes on loops and lists	Starter quizzes recapping Python fundamentals	Starter quizzes on design terminology	Starter quizzes on pre-production documents	Starter quizzes recapping the year's design and programming content
Extend your learning 	Take on independent Python challenges on an online coding platform	Extend a loop-based program to include additional input validation	Add an extension feature of your own choice to the project	Analyse a professional digital product and identify the design principles used	Produce an alternative visual identity for the same brief	Research the KS4 options available in Computing and identify which best suits your interests

Extracurricular activities **Careers links** **Curriculum links** **Threshold topics (bold)** **PSHE, PD and cultural capital links**

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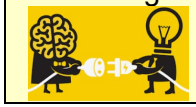
Exam boards - KS4: OCR GCSE J277 & OCR Cambridge National iMedia J834. KS5: OCR A Level H446 & V Level Digital*

	Year 10 - GCSE Computer Science (J277)					
	Half term 1	**Half term 2**	**Half term 3**	**Half term 4**	**Half term 5**	**Half term 6**
Knowledge, Skills and Understanding 	**GCSE Computer Science (J277):** • Operating systems and utility software • Variables, user input and string concatenation/slicing	**GCSE Computer Science:** • Networks and topologies • Wired and wireless networks, protocols and layers • Lists, 2D lists and arrays	**GCSE Computer Science:** • Wired and wireless networks, protocols and layers, continued • Reading, writing and appending to a file	**GCSE Computer Science:** • Identifying threats to computer systems • Identifying and preventing vulnerabilities • Functions, local and global variables	**GCSE Computer Science:** • Searching and sorting algorithms • SQL - SELECT, FROM, WHERE	**GCSE Computer Science:** • Searching and sorting algorithms, continued • Using random number generation • Programming project - planning, implementation and evaluation
	**GCSE Computer Science:** • Knowledge based assessment (Microsoft Forms - multiple choice and short answers)	**GCSE Computer Science:** • Skills based assessment. Open book programming task with guided tasks	**GCSE Computer Science:** • Exam question assessment. Skills tracker	**GCSE Computer Science:** • Exam question assessment. Skills tracker	**GCSE Computer Science:** • 2x exam question assessment. Skills tracker	**GCSE Computer Science:** • End of year assessment. Skills tracker
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Extracurricular activities **Careers links** **Curriculum links** **Threshold topics (bold)** **PSHE, PD and cultural capital links**

CIM - Curriculum Intent Map Computer Science

Exam boards - KS4: OCR GCSE J277 & OCR Cambridge National iMedia J834. KS5: OCR A Level H446 & V Level Digital*

	Year 10 - Cambridge National Creative iMedia (J834)					
	Half term 1	**Half term 2**	**Half term 3**	**Half term 4**	**Half term 5**	**Half term 6**
Knowledge, Skills and Understanding 	**Creative iMedia (J834) - R093:** • Sectors and products of the creative and digital media industry • Job roles within the media industry	**Creative iMedia - R093:** • Media codes and conventions • Legal, ethical and moral issues in the media industry	**Creative iMedia - R093:** • Pre-production documents - mood boards, visualisation diagrams, scripts and storyboards • R093 exam preparation	**Creative iMedia - R094:** • Introduction to visual identity and graphic design principles	**Creative iMedia - R094 (NEA):** • Developing original digital graphics for a client brief	**Creative iMedia - R094 (NEA):** • Refining and evaluating digital graphics against the brief
	**Creative iMedia:** • Knowledge based assessment (Microsoft Forms - multiple choice and short answers)	**Creative iMedia:** • Knowledge based assessment (Microsoft Forms)	**Creative iMedia:** • End of unit assessment. R093 mock exam	**Creative iMedia:** • Knowledge based assessment (Microsoft Forms)	**Creative iMedia:** • Skills based assessment. NEA progress check	**Creative iMedia:** • End of unit assessment. R094 NEA moderation. Skills tracker
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Extracurricular activities **Careers links** **Curriculum links** **Threshold topics (bold)** **PSHE, PD and cultural capital links**

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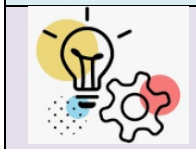
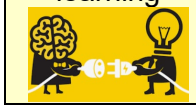
Exam boards - KS4: OCR GCSE J277 & OCR Cambridge National iMedia J834. KS5: OCR A Level H446 & V Level Digital*

	Year 11 - GCSE Computer Science (J277)					
	Half term 1	**Half term 2**	**Half term 3**	**Half term 4**	**Half term 5**	**Half term 6**
Knowledge, Skills and Understanding 	**GCSE Computer Science:** • Defensive design and testing • Choosing and using an IDE effectively	**GCSE Computer Science:** • Ethical, legal, cultural and environmental impacts of technology	**GCSE Computer Science:** • Binary and hexadecimal conversions • While and for loops • AND, OR and NOT logic	**GCSE Computer Science:** • Threats to computer systems, revisited • Functions, procedures, local and global variables	**GCSE Computer Science:** • File handling, SQL, lists, 2D lists and arrays - revision	**GCSE Computer Science:** • Final revision - Paper 1 and Paper 2 • Paper 1 and Paper 2 examinations
	**GCSE Computer Science:** • Knowledge based assessment (Microsoft Forms)	**GCSE Computer Science:** • Knowledge based assessment (Microsoft Forms)	**GCSE Computer Science:** • Skills based assessment. Open book programming task with guided tasks	**GCSE Computer Science:** • Exam question assessment. Skills tracker	**GCSE Computer Science:** • 2x exam question assessment. Skills tracker	**GCSE Computer Science:** • End of course assessment. Skills tracker
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Extracurricular activities **Careers links** **Curriculum links** **Threshold topics (bold)** **PSHE, PD and cultural capital links**

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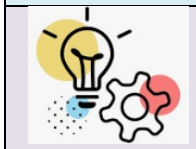
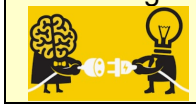
Exam boards - KS4: OCR GCSE J277 & OCR Cambridge National iMedia J834. KS5: OCR A Level H446 & V Level Digital*

	Year 11 - Cambridge National Creative iMedia (J834)					
	Half term 1	**Half term 2**	**Half term 3**	**Half term 4**	**Half term 5**	**Half term 6**
Knowledge, Skills and Understanding 	**Creative iMedia - optional unit (e.g. R096 Animation and Audio or R095 Characters and Comics):** • Planning documents for the optional unit	**Creative iMedia - optional unit:** • Production of assets against the brief (NEA)	**Creative iMedia - optional unit:** • Completion, review and evaluation of the optional unit (NEA submission and moderation)	**Creative iMedia:** • R093 revision and exam technique	**Creative iMedia:** • R093 past paper practice	**Creative iMedia:** • R093 examination sat • Final NEA moderation deadline
	**Creative iMedia:** • Skills based assessment. Planning documents review	**Creative iMedia:** • Skills based assessment. NEA progress check	**Creative iMedia:** • End of unit assessment. Optional unit NEA moderation. Skills tracker	**Creative iMedia:** • Knowledge based assessment (Microsoft Forms)	**Creative iMedia:** • Skills based assessment. Past paper marking and feedback	**Creative iMedia:** • End of course assessment. Skills tracker
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Extracurricular activities **Careers links** **Curriculum links** **Threshold topics (bold)** **PSHE, PD and cultural capital links**

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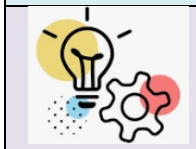
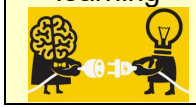
Exam boards - KS4: OCR GCSE J277 & OCR Cambridge National iMedia J834. KS5: OCR A Level H446 & V Level Digital*

	Year 12 - A Level Computer Science (H446)					
	Half term 1	**Half term 2**	**Half term 3**	**Half term 4**	**Half term 5**	**Half term 6**
Knowledge, Skills and Understanding 	**A Level Computer Science (H446):** • Thinking abstractly, ahead, procedurally, logically and concurrently • Data types and data structures	**A Level Computer Science:** • Boolean algebra • Operating systems and applications generation	**A Level Computer Science:** • Introduction to programming • Structure and function of the processor	**A Level Computer Science:** • Types of processor • Input, output and storage	**A Level Computer Science:** • Databases • Networks	**A Level Computer Science:** • Web technologies • Computing related legislation, ethical, moral and cultural issues
	**A Level Computer Science:** • Knowledge based assessment (Microsoft Forms)	**A Level Computer Science:** • Exam question assessment. Skills tracker	**A Level Computer Science:** • Skills based assessment. Open book programming task with guided tasks	**A Level Computer Science:** • Exam question assessment. Skills tracker	**A Level Computer Science:** • Exam question assessment. Skills tracker	**A Level Computer Science:** • End of year assessment. Skills tracker
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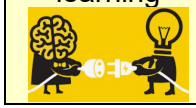
Exam boards - KS4: OCR GCSE J277 & OCR Cambridge National iMedia J834. KS5: OCR A Level H446 & V Level Digital*

	Year 12 - V Level Digital*					
	Half term 1	**Half term 2**	**Half term 3**	**Half term 4**	**Half term 5**	**Half term 6**
Knowledge, Skills and Understanding 	**V Level Digital*:** • Digital systems fundamentals - hardware, software and data representation	**V Level Digital*:** • How data informs decisions - data collection and data quality	**V Level Digital*:** • Designing digital solutions - analysing user needs and requirements	**V Level Digital*:** • Digital solution design methods - prototyping and wireframing	**V Level Digital*:** • Employer-set project briefing - major NEA project begins	**V Level Digital*:** • NEA project development against the brief
	**V Level Digital:** • Knowledge based assessment (Microsoft Forms)	**V Level Digital:** • Skills based assessment. Open book task with guided tasks	**V Level Digital:** • Knowledge based assessment (Microsoft Forms)	**V Level Digital:** • Skills based assessment. Design task with guided tasks	**V Level Digital:** • Skills based assessment. Project proposal review	**V Level Digital:** • Skills based assessment. NEA progress check. Skills tracker
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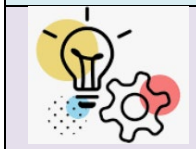
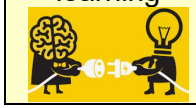
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	Year 13 - A Level Computer Science (H446)					
	Half term 1	**Half term 2**	**Half term 3**	**Half term 4**	**Half term 5**	**Half term 6**
Knowledge, Skills and Understanding 	**A Level Computer Science:** • Programming techniques • Computational methods	**A Level Computer Science:** • Algorithms • Non-exam assessment (NEA) project development	**A Level Computer Science:** • Non-exam assessment (NEA) project completion and write-up	**A Level Computer Science:** • Revision - Paper 1 content • Revision - Paper 2 content	**A Level Computer Science:** • Final revision and past paper practice	**A Level Computer Science:** • Study leave and final A Level examinations
	**A Level Computer Science:** • Knowledge based assessment (Microsoft Forms)	**A Level Computer Science:** • Skills based assessment. NEA progress check	**A Level Computer Science:** • End of unit assessment. NEA submission. Skills tracker	**A Level Computer Science:** • 2x exam question assessment. Skills tracker	**A Level Computer Science:** • End of year assessment. Skills tracker	**A Level Computer Science:** • End of course assessment. Skills tracker
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	Year 13 - V Level Digital*					
	Half term 1	**Half term 2**	**Half term 3**	**Half term 4**	**Half term 5**	**Half term 6**
Knowledge, Skills and Understanding 	**V Level Digital*:** • Major NEA project - implementation	**V Level Digital*:** • Major NEA project - testing and iteration	**V Level Digital*:** • Major NEA project - testing and iteration, continued	**V Level Digital*:** • Revision - digital systems and data topics	**V Level Digital*:** • Final NEA submission and moderation	**V Level Digital*:** • Study leave (examined component)
	**V Level Digital:** • Skills based assessment. NEA progress check	**V Level Digital:** • Skills based assessment. NEA progress check	**V Level Digital:** • Skills based assessment. NEA submission checkpoint	**V Level Digital:** • Knowledge based assessment (Microsoft Forms)	**V Level Digital:** • End of unit assessment. NEA moderation. Skills tracker	**V Level Digital:** • End of course assessment. Skills tracker
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