Computing & ICT

5 Year

Curriculum Journey

Subject: Computing		
Year group: 7	**KS3 Computing National Curriculum**	
	Content	**Department Assessment(s)**
Autumn Term 1	Baseline Introduction to school network & GSuite Hardware & Software	Baseline test Hardware & Software end of unit test
Autumn Term 2	Using Media - Gaining support for a cause	Online Blog and end of unit test
Spring Term 1	Online safety Pacman Programming (Scratch)	Project Evolve activities and online safety end of unit test
Spring Term 2	Pacman Programming (Scratch) Manipulating Images (Photoshop)	Pacman Learning Diary
Summer Term 1	End of year 7 assessment preparation Manipulating Images (Photoshop)	End of year 7 assessment Superhero movie poster
Summer Term 2	Physical Computing (Microbit)	Microbit Challenges Diary

Homework	Homework is set in Google Classroom for students to complete at home or within school at break and lunch times.
Subject / Department Key Terms	Students will explore a range of different key terms during their journey in year 7 Computing where they will be reminded of these key terms during formative and summative assessments.
Recommended Reading / Viewing	CGP KS3 Computing Complete Revision & Practice Help Your Kids with Computer Science (Key Stages 1-5): A Unique Step-by-Step Visual Guide to Computers, Coding, and Communication BBC Bitesize KS3 Computer Science Youtube: GCFLearnFree.org Khan Academy ThinkUKnow for online safety UK Safer Internet Centre UK Bebras Computational Thinking Challenges
How can technology help in this subject?	The choice and use of technology is fundamental within Computing. YouTube can support students to visually see concepts, especially the viewing of recommended videos is highly encouraged after lessons and this will allow students to consolidate their learning. Students can download Scratch for free to practise their visual/graphic programming skills to create programs/algorithms. Students can also continue to participate in Project Evolve, a new online safety platform in line with the Government's education for a connected world framework.
Skills required to succeed in this subject…	Analysing problems in computational terms. The ability to think creatively, innovatively, analytically, logically and critically. Good literacy and numeracy skills Visual/Graphical Programming skills

Vision for this subject…	Computing lessons should enable KS3 students to work towards being aspiring coders, foster the ability to think computationally when tackling problems, be digitally literate users of IT, use graphic and text-based programming languages to solve problems, understand the importance of online safety and the risks of online IT use and prepare them for KS4 Computer Science & IT courses.

Subject: Computing		
Year group: 8	**KS3 Computing National Curriculum**	
	Content	**Department Assessment(s)**
Autumn Term 1	Operating Systems	Poster created in Microsoft Publisher
Autumn Term 2	Python - textual programming	Python programming tasks and end of unit test
Spring Term 1	SketchUp	Presentation of dream home created in SketchUp
Spring Term 2	Binary: bits & bobs	End of unit test
Summer Term 1	End of year 8 assessment preparation Developing for the web	End of year 8 assessment End of unit website
Summer Term 2	Developing for the web	End of unit website
Homework	Homework is set in Google Classroom for students to complete at home or within school at break and lunch times.	

Subject / Department Key Terms	Students will explore a range of different key terms during their journey in year 8 Computing where they will be reminded of these key terms during formative and summative assessments.
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How can technology help in this subject?	The choice and use of technology is fundamental within Computing. YouTube can support students to visually see concepts, especially the viewing of recommended videos is highly encouraged after lessons and this will allow students to consolidate their learning. Students can download Python for free to practise their visual/graphic programming skills to create programs/algorithms. Students can also continue to participate in Project Evolve, a new online safety platform in line with the Government's education for a connected world framework.
Skills required to succeed in this subject…	Analysing problems in computational terms. The ability to think creatively, innovatively, analytically, logically and critically. Good literacy and numeracy skills Textual Programming skills
Vision for this subject…	Computing lessons should enable KS3 students to work towards being aspiring coders, foster the ability to think computationally when tackling problems, be digitally literate users of IT, use graphic and text-based programming languages to solve problems, understand the importance of online safety and the risks of online IT use and prepare them for KS4 Computer Science & IT courses.

Subject: Computing		
Year group: 9	**KS3 Computing National Curriculum**	
	Content	**Department Assessment(s)**
Autumn Term 1	Trends in Computing & IT	Group presentation/individual assessment
Autumn Term 2	Python - textual programming	Python programming tasks and end of unit test
Spring Term 1	Cyber Crime	End of Unit test
Spring Term 2	Year 9 Computing assessment preparation	Year 9 Computing assessment
Summer Term 1	Networks	End of unit test
Summer Term 1	Media animations	Media animation project
Homework	Homework is set in Google Classroom for students to complete at home or within school at break and lunch times.	

Subject / Department Key Terms	Students will explore a range of different key terms during their journey in year 9 Computing where they will be reminded of these key terms during formative and summative assessments.
Recommended Reading / Viewing	CGP KS3 Computing Complete Revision & Practice Help Your Kids with Computer Science (Key Stages 1-5): A Unique Step-by-Step Visual Guide to Computers, Coding, and Communication BBC Bitesize KS3 Computer Science Youtube: GCFLearnFree.org Khan Academy ThinkUKnow for online safety UK Safer Internet Centre UK Bebras Computational Thinking Challenges
How can technology help in this subject?	The choice and use of technology is fundamental within Computing. YouTube can support students to visually see concepts, especially the viewing of recommended videos is highly encouraged after lessons and this will allow students to consolidate their learning. Students can download Python for free to practise their visual/graphic programming skills to create programs/algorithms. Students can also continue to participate in Project Evolve, a new online safety platform in line with the Government's education for a connected world framework.
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Subject: Computer Science

Year group: 10		Exam Board: OCR
	Content	**Department Assessment**
Autumn Term 1	1.1 Systems Architecture • Architecture of the CPU • CPU performance • Embedded Systems 2.1 Algorithms • Computational Thinking • Designing, creating and refining algorithms • Searching and sorting algorithms	1.1 end of topic test 2.1 end of topic test
Autumn Term 2	1.2 Memory & Storage - Part A • Primary storage • Secondary storage 1.2 Memory & Storage - Part B • Units • Data storage • Compression	1.2 Part A end of topic test 1.2 Part B end of topic test
Spring Term 1	2.2 Programming Techniques - Part A • Programming Fundamentals • Data types • Practical Programming Skills	2.2 Part A end of topic test Practical programming skills in tasks
Spring Term 2	1.3 Computer networks, connections and protocols - PART A • Networks and Topologies	1.3 Part A end of topic test
Summer Term 1	1.3 Computer networks, connections and protocols - PART B • Wired and Wireless networks, protocols and layers. Practical Programming Skills Revision 1.4 Network Security • Threats to computer systems and networks • Identifying and preventing vulnerabilities	1.3 Part B end of topic test

Summer Term 2	Year 10 Mock Revision 1.5 Systems Software • Operating systems • Utility software	Year 10 Mock
Homework	Students will be instructed when to copy the notes from CraignDave YouTube videos as preparation for their next lesson. Revision for end of topic tests	
Subject / Department KeyTerms	*for example PEE (Point.Evidence.Explain)* *WISE (Write.identify.Substitute.Ensure)* *BUKS (Box.Underline.Knowledge.Structure)*	
Recommended Reading / Viewing	CGP GCSE Computer Science OCR Complete Revision & Practice (this can be purchased from school at a discounted rate compared to RRP) My Revision Notes: OCR GCSE (9-1) Computer Science, Third Edition YouTube CraignDave GCSE J277 Video Playlists YouTube MrBrownCS GCSE J277 Computer Science Video Playlists BBC Bitesize GCSE OCR Computer Science	
How can technology help in this subject?	World Wide Web - researching and investigating Python Programming 101computing.net Google Classroom	
Skills required to succeed in this subject…	Analysing problems in computational terms. The ability to think creatively, innovatively, analytically, logically and critically. Good literacy and numeracy skills Programming Practising exam questions & using mark schemes to self-assess answers	
Vision for this subject…	Computer Science lessons should enable KS4 students to work towards being competent and independent coders with secure digital literacy skills, develop the ability to think computationally when tackling problems, apply the core Computer Science principles, identify and use the programming constructs of sequence, selection and iteration in a range of programming language be discerning researchers, creators and refiners of digital artefacts in the production of their work, be advanced digitally literate users of IT, debate the ethical, legal, cultural and environmental impact of the use of computers and prepare them for KS5 Computer Science & IT courses.	

Subject: Computer Science

Year group: 11		Exam Board: OCR
	Content	**Department Assessment**
Autumn Term 1	Recap on 1.4 Network Security and 1.5 Systems Software 1.6 – Ethical, legal, cultural and environmental impacts of digital technology • Impacts of digital technology on wider society • Legislation relevant to Computer Science 2.4 Boolean Logic Autumn Mock Revision	1.4 & 1.5 end of topic test 1.6 extended writing questions/answers in lessons 2.4 end of topic test
Autumn Term 2	Autumn Mock Revision 2.3 – Producing robust programs • Defensive Design • Testing 2.5 – Programming languages and Integrated Development Environments • Languages • The Integrated Development Environments	Autumn Mock 2.3 end of topic test 2.5 end of topic test
Spring Term 1	2.2 Programming Techniques - Part B • Additional Programming Techniques Theory revision Practical Programming Skills	2.2 Part B end of topic test OCR exam practice questions
Spring Term 2	Theory revision Practical Programming Skills	OCR exam practice questions

Summer Term 1	Theory revision Practical Programming Skills	OCR exam practice questions
Summer Term 2	Study leave/exams	
Homework	6 practice questions a week Algorithm Practice workbook Grade Booster Pack Students will be instructed when to copy the notes from CraignDave YouTube videos as preparation for their next lesson. Revision for end of topic tests	
Subject / Department KeyTerms	*for example PEE (Point.Evidence.Explain)* *WISE (Write.identify.Substitute.Ensure)* *BUKS (Box.Underline.Knowledge.Structure)*	
Recommended Reading / Viewing	CGP GCSE Computer Science OCR Complete Revision & Practice (this can be purchased from school at a discounted rate compared to RRP) My Revision Notes: OCR GCSE (9-1) Computer Science, Third Edition YouTube CraignDave GCSE J277 Video Playlists YouTube MrBrownCS GCSE J277 Computer Science Video Playlists BBC Bitesize GCSE OCR Computer Science	
How can technology help in this subject?	World Wide Web - researching and investigating Python Programming 101computing.net Google Classroom	
Skills required to succeed in this subject…	Analysing problems in computational terms. The ability to think creatively, innovatively, analytically, logically and critically. Good literacy and numeracy skills Programming Practicing exam questions & using mark schemes to self-assess answers	

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Subject: Vocational ICT (Technical Award)		
Year group: 10		**Exam Board: Eduqas**
	Content	**Department Assessment**
Autumn Term 1	1.1.1 - Functionality of different hardware devices 1.1.2 - Functionality of different software	1.1.1 & 1.1.2 topic tests
Autumn Term 2	1.1.3 Services provided by IT 1.2.1 Why data must be fit for purpose 1.2.2 How input data is checked for errors	1.1.3 & 1.2.1 & 1.2.2 topic tests
Spring Term 1	1.2.3 How data transfers over different types of network 1.2.4 Different types of connectivity Introduction of Unit 2 Practice NEA	1.2.3 & 1.2.4 topic tests Presentation/s Data Capture 1
Spring Term 2	1.3.1 Risks to information held on computers 1.3.2 The impact of data loss, theft or manipulation on individuals and businesses 1.3.3 Methods used to protect information Unit 2 Practice NEA	1.3.1 & 1.3.2 & 1.3.3 topic tests Presentation/s
Summer Term 1	1.3.1 Risks to information held on computers 1.3.2 The impact of data loss, theft or manipulation on individuals and businesses 1.3.3 Methods used to protect information Unit 1 Revision for Mock Exam Preperation	1.3.1 & 1.3.2 & 1.3.3 topic tests Presentation/s

Summer **Term 2**	Year 10 Mock Exam Preparation for Unit 2 Live NEA	Year 10 Mock Exam for End of Year Data Capture.
Homework	Revision for end of topic tests. Case studies Completion of unit 2 coursework tasks Homework is set in the form of short/medium answer questions as well as longer 12 mark questions. Students will be asked to complete activities in their student workbook. Revision tasks are also set for end of topics tests and students are allowed to continue/complete their unit 2 coursework from home.	
Subject / Department KeyTerms	*A list of keywords are provided for each student in Google Classroom and on paper.*	
Recommended Reading / Viewing	Level 1/2 Vocational Award in ICT - Course Companion - Unit 1 Unit 1 Student Workbook Unit 1 Knowledge Organisers BBC Bitesize ICT	
How can technology help in this subject?	World Wide Web - researching and investigating Word processing - typing up theory and work based tasks Spreadsheet - to store text and numbers, carry out calculations/formulas. Databases - how to store and retrieve data/information Photo editing - how to create and edit images of different types.	

Skills required to succeed in this subject…	Notes taking Personal research Debating Practising exam questions & using mark schemes to self-assess answers
Vision for this subject…	Jobs in ICT exist in a variety of contexts. However, there are key areas of knowledge that any ICT specialist will be required to know. This base knowledge allows them to provide the best service and advice possible for their clients and the industries they are working in. ICT usage is becoming increasingly widespread in day-to-day life, as people become progressively dependent on their digital devices. In 2018, Ofcom reported that 78% of UK adults owned a smartphone and 64% of adults described the internet as 'an essential part of their life'. In the workplace, ICT is also vital for the smooth running of many everyday tasks as well as enabling organisations to operate in a more efficient manner. There are a number of key skills that employers look for which centre around having an understanding of, and the practical ability to use, a range of computer programmes, software and other applications. Unit 1 allows learners to explore the wide range of uses of hardware, application and specialist software in society. They will investigate how information technology is used in a range of contexts, including business and organisations, education and home use. Unit 2 enables learners to gain a broad working knowledge of databases, spreadsheets, automated documents and images and to apply their knowledge and understanding to solve problems in vocational settings.

Subject: Vocational ICT (Technical Award)		
Year group: 11		**Exam Board: Eduqas**
	Content	**Department Assessment**
Autumn Term 1	1.3.4 How moral and ethical issues affect computer users 1.3.5 How legal issues protect computer users 1.3.6 The cultural, personal and environmental impact of ICT 1.3.7 How a digital footprint can impact computer users Revision for Year 11 Mock Exam in November	DC1 year 11 1.3.4 & 1.3.5 & 1.3.6 & 1.3.7 topic tests
Autumn Term 2	Unit 2 Live NEA - Planning & Design - Implementation 2.1 Planning, creating, modifying and using databases 2.2 Planning, creating, modifying and using spreadsheets	Year 11 Autumn Exam for DC2 Unit 2 Live NEA tasks 2.1 and 2.2
Spring Term 1	Unit 2 Live NEA - Implementation - Evaluation and submission 2.3 Planning, creating and modifying an automated document 2.4 Planning, creating, manipulating and storing images	Unit 2 Live NEA tasks 2.3 and 2.4

Spring **Term 2**	Year 11 Spring Mock Unit 1 Revision - topics recap and exam practice	Year 11 Autumn Exam for DC3 Unit 2 Live NEA tasks 2.1 and 2.2
Summer Term 1	Unit 1 Revision - topics recap and exam practice	Unit 1 Terminal Exam (May)
Summer Term 2		
Homework	Revision for end of topic tests. Case studies Completion of unit 2 coursework tasks Homework is set in the form of short/medium answer questions as well as longer 12 mark questions. Students will be asked to complete activities in their student workbook. Revision tasks are also set for end of topics tests and students are allowed to continue/complete their unit 2 coursework from home.	
Subject / Department KeyTerms	*A list of keywords are provided for each student in Google Classroom and on paper.*	
Recommended Reading / Viewing	Level 1/2 Vocational Award in ICT - Course Companion - Unit 1 Unit 1 Student Workbook Unit 1 Knowledge Organisers BBC Bitesize ICT	

How can technology help in this subject?	World Wide Web - researching and investigating Word processing - typing up theory and work based tasks Spreadsheet - to store text and numbers, carry out calculations/formulas. Databases - how to store and retrieve data/information Photo editing - how to create and edit images of different types.
Skills required to succeed in this subject…	Notes taking Personal research Debating Practising exam questions & using mark schemes to self-assess answers
Vision for this subject…	Jobs in ICT exist in a variety of contexts. However, there are key areas of knowledge that any ICT specialist will be required to know. This base knowledge allows them to provide the best service and advice possible for their clients and the industries they are working in. ICT usage is becoming increasingly widespread in day-to-day life, as people become progressively dependent on their digital devices. In 2018, Ofcom reported that 78% of UK adults owned a smartphone and 64% of adults described the internet as 'an essential part of their life'. In the workplace, ICT is also vital for the smooth running of many everyday tasks as well as enabling organisations to operate in a more efficient manner. There are a number of key skills that employers look for which centre around having an understanding of, and the practical ability to use, a range of computer programmes, software and other applications. Unit 1 allows learners to explore the wide range of uses of hardware, application and specialist software in society. They will investigate how information technology is used in a range of contexts, including business and organisations, education and home use. Unit 2 enables learners to gain a broad working knowledge of databases, spreadsheets, automated documents and images and to apply their knowledge and understanding to solve problems in vocational settings.