Computing & ICT

5 Year

Curriculum Journey

2021 – 2022

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	Pacman Programming (Scratch) Physical Computing (Microbit)	Pacman Learning Diary Microbit Challenges Diary
Spring Term 2	Online Safety	Project Evolve activities and online safety end of unit test
Summer Term 1	End of year 7 assessment preparation Manipulating Images (Photoshop)	End of year 7 assessment
Summer Term 2	Manipulating Images (Photoshop)	Superhero movie poster

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 2	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
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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 Practicing 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

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
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