

ASHTON COMMUNITY SCIENCE COLLEGE: COMPUTING CURRICULUM

	Year 10 Computer Science						
	Half term 1	Half term 2	Half term 3	Half term 4	Half term 5	Half term 6	
Knowledge	Topic: Algorithms Programming skills	<u>Topic</u> : Algorithms System architecture Programming skills	Topic: • Programming fundamentals	Topic:Memory and storageBoolean logicProgramming skills	Topic: Producing robust programs Programming skills	<u>Topic</u> : • Ethical, legal, cultural and environmental impacts of digital technology • Programming skills	
Skills/ application of knowledge	 Computational thinking Designing, creating and refining algorithms Searching and sorting algorithms 	 The purpose of the CPU Common CPU components CPU performance Embedded systems 	 Programming fundamentals Data types Additional programming techniques 	 Primary storage Secondary storage Data units Data storage Compression Boolean logic 	 Defensive design Testing 	 Ethical, legal, cultural and environmental impact of digital technology on wider society 	
Links to prior learning	 Year 7- under the hood of a computer, Micro:bits, small basic Year 8- computational thinking, python introduction Year 9- python programming 	 Year 7- under the hood of a computer, Micro:bits, small basic Year 8- logic gates & truth tables, python introduction Year 9- memory, python programming 	 Year 7- Micro:bits, small basic Year 8- computational thinking, python introduction Year 9- python programming 	 Year 7- under the hood of a computer, types of storage, Micro:bits, small basic Year 8- logic gates & truth tables, python introduction Year 9- data representation, memory, python programming 	 Year 7- Micro:bits, small basic Year 8- python introduction Year 9- python programming 	 Year 7- E-safety, Micro:bits, small basic Year 8- artificial intelligence, system security, python introduction Year 9- ethical, legal, cultural and environmental issues in computing, python programming 	
Assessment	End of topic testExam questions	End of topic testExam questions	 End of topic test Exam questions 	 End of topic test Exam questions 	 End of topic test Exam questions 	 End of topic test Exam questions 	



	Year 11 Computer Science					
	Half term 1	Half term 2	Half term 3	Half term 4	Half term 5	
Knowledge	Topic: Networks and protocols Programming skills	<u>Topic</u> : System security Programming skills	Topic:Programming languages and Integrated Development EnvironmentsProgramming skills	Topic: System software Programming skills	<u>Topic</u> : Revision Programming skills	
Skills/ application of knowledge	 Networks and topologies Wired and wireless networks, protocols, and layers 	 Threats to computer systems and networks Identifying and preventing vulnerabilities 	 Languages The integrated development environment 	 Operating systems Utility software 	Exam technique	
Links to prior learning	 Year 7- how the web works, Micro:bits, small basic Year 8- networks, python introduction Year 9- python programming 	 Year 7- E-safety, Micro:bits, small basic Year 8- system security, python introduction Year 9- Ethical, legal, cultural and environmental issues in computing, python programming 	 Year 7- Micro:bits, small basic Year 8- python introduction Year 9- python programming 	 Year 7- under the hood of a computer, Micro:bits, small basic Year 8- system software, python introduction Year 9- Ethical, legal, cultural and environmental issues in computing, python programming 		
Assessment	End of topic testExam questions	End of topic testExam questions	End of topic testExam questions	End of topic testExam questions		



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			Year 10 Creative if	Media		
	Half term 1	Half term 2	Half term 3	Half term 4	Half term 5	Half term 6
Knowledge	Topic: R093 Creative iMedia in the media industry R093 Factors influencing product design	Topic: ■ R094 Visual identity and digital graphics	Topic: • R094 Visual identity and digital graphics	Topic: R094 Visual identity and digital graphics	Topic: R094 Visual identity and digital graphics	<u>Topic</u> : ■ R097 Interactive digital media
Skills/ application of knowledge	 The products and job roles within the media sector How style, content and layout are linked to the purpose of the product Client and audience identification Research methods and sourcing information 	 Developing a visual identity- the purpose elements and design of products Planning digital graphics for products Graphic design conventions Properties and use of graphics 	 Developing a visual identity- the purpose elements and design of products Planning digital graphics for products Graphic design conventions Properties and use of graphics 	 Creating a visual identity Creating a digital graphic Tools and techniques used to create digital graphics Technical skills to source, create and prepare assets Techniques used to save and export visual identity's and digital graphics 	 Creating a visual identity Creating a digital graphic Tools and techniques used to create digital graphics Technical skills to source, create and prepare assets Techniques used to save and export visual identity's and digital graphics 	 Planning digital media Types of interactive media and hardware Features and conventions of digital media Resources required to create interactive digital media Preproduction documents used to plan interactive digital media
Links to prior learning Assessment	 Year 7- how the web works, Year 8- multimedia products Year 9- digital graphics Mid unit 	 Year 7- how the web works, Year 8- multimedia products Year 9- digital graphics Year 10- R093 Factors influencing product design Recall questions 	 Year 7- how the web works, Year 8- multimedia products Year 9- digital graphics Year 10- Factors influencing product design Recall questions 	 Year 7- how the web works, Year 8- multimedia products Year 9- digital graphics Year 10- R093 Factors influencing product design Recall questions 	 Year 7- how the web works, Year 8- multimedia products Year 9- digital graphics Year 10- R093 Factors influencing product design Recall questions 	 Year 7- how the web works, Year 8- multimedia products Year 9- digital graphics Year 10- R093 Factors influencing product design Recall questions
Assessment	 Mid unit assessment End of topic test 	8	9	ę	U	ő



ASHTON COMMUNITY SCIENCE COLLEGE: COMPUTING CURRICULUM

		Year 11	Creative iMedia		
	Half term 1	Half term 2	Half term 3	Half term 4	Half term 5
Knowledge	Topic: • R097 Interactive digital media	<u>Topic</u> : • R097 Interactive digital media	Topic: • R097 Interactive digital media	Iopic:•R093 Creative iMedia in the media industry•R093 Factors influencing product design•Revision	Iopic:R093 Creative iMedia in the media industryR093 Factors influencing product designRevision
Skills/ application of knowledge	 Creating different types of assets for use in interactive digital media products such as audio, images and videos File naming conventions Creating an interactive digital media product Techniques used to save and export interactive digital media products 	 Creating different types of assets for use in interactive digital media products such as audio, images and videos File naming conventions Creating an interactive digital media product Techniques used to save and export interactive digital media products Testing an interactive digital media product Reviewing an interactive digital media product 	 Testing an interactive digital media product Reviewing an interactive digital media product 	 The products and job roles within the media sector How style, content and layout are linked to the purpose of the product Client and audience identification Research methods and sourcing information Exam technique 	 The products and job roles within the media sector How style, content and layout are linked to the purpose of the product Client and audience identification Research methods and sourcing information Exam technique
Links to prior learning	 Year 7- how the web works, Year 8- multimedia products Year 9- digital graphics Year 10- R093 Factors influencing product design, R094 Visual identity and digital graphics Recall questions 	 Year 7- how the web works, Year 8- multimedia products Year 9- digital graphics Year 10- R093 Factors influencing product design, R094 Visual identity and digital graphics Recall questions 	 Year 7- how the web works, Year 8- multimedia products Year 9- digital graphics Year 10- R093 Factors influencing product design, R094 Visual identity and digital graphics Recall questions 	 Year 7- how the web works, Year 8- multimedia products Year 9- digital graphics Year 10- R093 Creative iMedia in the media industry, R093 Factors influencing product design Recall questions 	 Year 7- how the web works, Year 8- multimedia products Year 9- digital graphics Year 10- R093 Creative iMedia in the media industry, R093 Factors influencing product design Recall questions
Assessment	Recall questions Coursework	 Recall questions Coursework 	 Recall questions Coursework 	 Recall questions Skills quizzes Past paper 	 Recall questions Skills quizzes Past paper