

Computing Curriculum Endpoints

	What will pupils know ?	What will pupils be able to do ?	What will pupils be ?
COMPUTER SCIENCE			
Year 11	- The fundamental principles and concepts of computational thinking including abstraction, decomposition, logic, algorithms and data representation - The components that make up digital systems and how they communicate - The impact of digital technology to the individual and to wider society	- 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 - Apply mathematical skills relevant to Computer Science	- Resilient problem solvers and programmers - Successful in their Computer Science qualification and future careers/jobs
CREATIVE IMEDIA			
Year 11	- The fundamental principles and concepts of digital media including factors that influence product design, use of media codes and conventions, pre-production planning techniques, legal issues and creation/publishing/distribution considerations - The media industry relating to different sectors, new media, products and job roles for digital graphics	- Apply learning and practical skills to real-life contexts and work situations relevant to the media industry and more widely - Think creatively, innovatively, analytically, logically and critically - Design, plan, create and review digital media products which are fit for purpose meeting both client and target audience requirements	- Creative developers of multimedia products - Successful in their Creative iMedia qualification and future careers/jobs
COMPUTER SCIENCE			
Year 10	- The architecture and performance of the CPU - The purpose of primary and secondary storage - The purpose of binary to store data in computers - The purpose of compression (lossy and lossless) - The need for networks, connections and protocols - The purpose and functionality of systems software - The purpose of defensive design and testing - The characteristics of programming languages	- Convert between denary, binary and hexadecimal - Perform binary addition and binary shifts - Draw network topologies (star and mesh) - Identify forms of attack and prevention methods - Use abstraction and decomposition on problems - Design, create and refine algorithms - Apply searching and sorting algorithms on data - Draw truth tables/logic gates for Boolean operators	- Aware of the impact technology has on society (ethical, legal, cultural and environmental) - Knowledgeable in a wide range of Computer Science concepts
CREATIVE IMEDIA			
Year 10	- The types of interactive digital media, content and associated hardware - The features and conventions of interactive digital media - The resources required to create interactive digital media products	- Use web development tools in RocketCake - Use technical skills to create, edit and manage assets for use in interactive digital media products - Use techniques to save and export/publish interactive digital media - Use techniques to test/check and review interactive digital media	- Aware of real world industry practices for product design - Knowledgeable in a wide range of Creative iMedia topics

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	- The purpose of planning documentation to generate interface and content ideas	- Plan, create and review interactive digital media	
	What will pupils know ?	What will pupils be able to do ?	What will pupils be ?
COMPUTING			
Year 9	- The purpose, component features, elements and design style of visual identity - The concepts of graphic design and layout conventions for different products and purposes - The technical properties of digital graphics and the licences and permissions needed to use assets - The purpose of planning documentation to generate ideas for visual identity and digital graphics - The programming constructs used to control the flow of a program - The main data types (integer, string, real) - The common arithmetic, logic and comparison operators - The purpose of a variable - The purpose of lists/arrays - The benefits of subprograms	- Use image editing tools in Photoshop - Use technical skills to source, create and prepare assets - Use techniques to save and export visual identity and digital graphics - Develop visual identities for clients - Use the concepts of graphic design to create original digital graphics to engage target audiences - Use variables, operators, inputs, outputs and assignments - Use sequence, selection and iteration - Use basic string manipulation - Use random number generation - Use basic file handling operations - Use lists when solving problems - Use subprograms to produce structured code	- Creators of original digital graphics with a unique visual identity - Prepared to start a qualification in Creative iMedia - Confident and experienced programmers - Prepared to start a qualification in Computer Science
Year 8	- The difference between bitmap and vector images - The categories for audience and purpose - The difference between hardware and software - The purpose of binary to store data in computers - The different algorithms and their efficiency - The programming constructs (sequence, selection, iteration)	- Use image editing tools in Fireworks - Use web development tools in Dreamweaver - Create media products for different scenarios - Perform binary addition and conversion - Plan and design algorithms to solve problems - Apply programming concepts in a textual language including data structures and subprograms	- Developers of innovative and appropriate digital content - Effective and efficient programmers
Year 7	- The importance of using technology safely - The difference between data and information - The difference between fields and records - The main data types (integer, string) - The difference between inputs and outputs - The programming constructs (sequence, selection, iteration)	- Use Microsoft Office packages (Word, PowerPoint, Publisher, Excel, Access) - Process and represent data appropriately - Retrieve data to present information - Apply programming concepts in a visual language including arithmetic, logic and comparison operators - Develop and refine functional programs	- Confident users of the Colmers Network - Responsible E-Citizens - Proficient users of software packages - Digitally literate for learning both in school and beyond - Creative and curious programmers - Reflective users of technology