



Alcester Academy Curriculum Planning: Key Stage 4 (Yr11) Cambridge National in Creative iMedia 2023-24

Pupils in Cambridge National - Creative iMedia in year 11 have two (1 hour) lessons each week.

Department: <i>ICT & Computing</i>							
Term	Topic/Subject	Assessment Objectives	Knowledge Acquisition	Skill building & intent	Wider reading opportunities, including numeracy & SMSC.	Assessment Task	SEND & PP
Aut1	R099 Digital Games	<p>1.1 Types, characteristics & conventions of digital games</p> <p>Types of digital games & their characteristics. Conventions & styles of digital games. Game objectives. Creativity in digital games.</p>	<p>Pupils build on the skills & knowledge covered during Summer 2 in year 10 iMedia, to continue to produce content required for controlled coursework elements in this course.</p> <p>Pupils will learn:</p> <ul style="list-style-type: none"> • Characteristics of each digital game type • Digital game types which are most appropriate for specific target audience groups • Digital game types which are most appropriate for particular platforms • Applying the concept of MVP (Minimum Viable Product) when planning games to ensure audience engagement • Key conventions of each genre and style, how they differ from each other and the types of games which are best suited to each 	<ul style="list-style-type: none"> • interpret client/focus group requirements for digital game concepts (e.g. game genre, intended platform, • purpose) based on a specific brief (e.g. by client discussion, reviewing a written brief or specification) • understand target audience requirements 	<p>Resources are introduced, and demonstrated to pupils visually initially, then pupils begin to develop individual skills supported by framework of tasks delivered over Google Classroom.</p> <p>https://www.clickteam.com/clickteam-fusion-2-5</p> <ul style="list-style-type: none"> • Trigger • Event • Action • Frame editor • Event editor • Storyboard editor • Path movement • Sideways shooter • Numeracy – use of coordinates, angles, timings, frequency. • Target audience, purpose, requirements. • Importance of computer programming/coding skills, opportunities in career development. • Discussion about game design as career choice, importance of game design industry in south Warwickshire area. 	<ul style="list-style-type: none"> • All R099 activities are assessed through continual assessment, based on exam board assessment criteria 	<p>Additional support for both SEND & PP provided where required. Classroom activities preparing for controlled coursework are all structured through online, Google Classroom learning logs. All learning logs contain relevant framework, and supporting video content to provide additional content & cater for alternative styles of learning.</p>



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		<p><u>1.2 Resources required to create digital games</u> Hardware & peripherals Software</p>	<ul style="list-style-type: none">• How games increase in difficulty or complexity to maintain player engagement through multiple levels, spin-offs, side missions• How different features of games appeal to different audience types• Distinguishing features of each type of game objective• Identifying objectives and deciding which are the most appropriate for target audiences and/or platforms• Choosing game objectives which make games immersive or engaging/appealing <p>Pupils will learn:</p> <ul style="list-style-type: none">• Key features, capabilities and limitations of game creation hardware and peripherals• Hardware and peripherals which are best suited to particular game types, genres or platforms• The positive and negative impacts hardware and peripheral choice has on final games	<p>Be able to analyse & identify hardware & software required, and potential uses for both.</p>			
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		<p><u>1.3 Pre-production and planning documentation & techniques for digital games</u> Game concepts Game planning</p>	<ul style="list-style-type: none">• Differences between game IDEs, drag-and-drop visual programming languages and scripting languages• Why developers would use game engines, game editors, app development or software development kits (SDK)• The positive and negative impacts which software choice has on final games <p>Pupils will learn:</p> <ul style="list-style-type: none">• What is meant by the term 'game concept'• What constitutes 'derivative' game ideas (as opposed to original games)• Devising original game concepts• Devising and setting out narratives or sets of objectives for original game concepts• Using pre-production documentation to outline game concepts to clients (as distinct from those needed by the developer or programmer)				
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			<ul style="list-style-type: none"> Using concept art to show overall visual style and style and appearance of elements including player characters, NPCs, objects, terrains/scenery/rooms, start screens/menu options Creating flowcharts/decision trees/narrative pathways/story arcs to plan structures by indicating choices for gameplay/different routes or pathways through digital games Planning how scoring mechanisms are displayed and integrated within the visuals of digital games and how feedback to players is provided during gameplay. 				
Autumn 2	R099 Digital Games	2.1 Techniques to explain game concepts Game design documents (GDDs)	<p>Pupils will learn:</p> <ul style="list-style-type: none"> How GDDs are used to engage and inform developers and clients, keeping games 'on track' during their creation by setting out the key goals and concepts of game ideas Format, layout and structure of GDDs to explain concepts clearly 	<ul style="list-style-type: none"> interpret client/focus group requirements for digital game concepts (e.g. game genre, intended platform, able to plan the creation of a digital game to take account of genre concept narrative characters locations. <p>Be able to create an effective GDD, and understand the content, layout & structure to use.</p>	<p>Resources are introduced, and demonstrated to pupils visually initially, then pupils begin to develop individual skills supported by framework of tasks delivered over Google Classroom.</p> <p>https://www.clickteam.com/clickteam-fusion-2-5</p> <ul style="list-style-type: none"> Trigger Event Action Frame editor Event editor Storyboard editor Path movement Sideways shooter 	<ul style="list-style-type: none"> All R099 activities are assessed through continual assessment, based on exam board assessment criteria. 	<p>Additional support for both SEND & PP provided where required. Classroom activities preparing for controlled coursework are all structured through online, Google Classroom learning logs. All learning logs contain relevant framework, and supporting video content to provide additional content & cater for alternative styles of learning.</p>



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		<p><u>2.2 Technical skills to create & edit/manage assets for use within digital games</u> Preparation of assets for use Asset management within game creation software</p>	<ul style="list-style-type: none"> • Creating GDDs to engage and inform clients or investors by explaining key elements of concepts including Unique Selling Points (USP) /elevator pitches/concept statements, genres, platforms, target audiences, characters, synopsis of story, gameplay, in-game purchases or monetisation, • objectives and art, sounds and music • Design specifics to inform and engage developers, including progression, scoring, timing, levels, interactivity, user interface and controls, game objects, core loops and game structures, concept art, geometric parameters and game mechanics <p>Pupils will learn:</p> <ul style="list-style-type: none"> • Preparing assets for use within digital games by editing properties e.g. size and resolution, cutting, cropping, changing length/duration of video or animation, formatting text, 	<p>Be able to create & modify original assets for use within game designs.</p> <p>Be able to use effective asset management techniques & naming criteria within game designs.</p>	<ul style="list-style-type: none"> • Numeracy – use of coordinates, angles, timings, frequency. • Target audience, purpose, requirements. • Importance of computer programming/coding skills, opportunities in career development. • Discussion about game design as career choice, importance of game design industry in south Warwickshire area. <p>Resources are introduced, and demonstrated to pupils visually initially, then pupils begin to develop individual skills supported by framework of tasks delivered over Google Classroom.</p> <ul style="list-style-type: none"> • Client Requirements • Timescales • Primary research • Secondary research • Work plans • Milestones 		
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		<p><u>2.3 Technical skills to create digital games</u> Techniques used to create digital games</p>	<p>animating static images to create moving objects or characters, duplicating graphics to create larger backgrounds or textures, creating infinite backgrounds for scrolling games out of static images</p> <ul style="list-style-type: none">• Using graphics editing software and/or hand drawn artwork to generate assets for characters, objects or scenery/terrains• Using graphics editors which are built into game creation software to create or edit library images• Using appropriate file formats for assets to be compatible with game creation software <p>Pupils will learn:</p> <ul style="list-style-type: none">• Writing routines, procedures, blocks, scripts, actions and events to generate outputs based on player inputs in a game• Creating movement of players, objects and/or NPCs• Creating scoring and timing mechanisms in digital games, including game		<ul style="list-style-type: none">• Contingencies• Target Audience		
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		<p><u>2.4 Techniques to save & export digital games</u> Saving digital games during creation Exporting finished digital games</p>	<p>start/customisation/ menu and game end/restart/level up/high score table</p> <ul style="list-style-type: none">• Generating rooms/levels to include appearance and parameters including movement/scrolling background/gravity• Creating player characters and NPCs/objects in digital games• Setting geometric parameters including scale, speed, visibility, solidity, gravity and timing• Setting up collision detection to control actions and events <p>Pupils will learn:</p> <ul style="list-style-type: none">• Saving digital games in native software using propriety formats to maintain editable versions during creation• Using version control and naming conventions to help rollback of features during the testing phase• Using settings/processes to export finished digital games• Using appropriate file formats for games to be played without requirin				
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			installation of specialist software, compatibility of file formats with platforms and devices				
Spring 1	R099 Digital Games	<p>3.1 Techniques to test/check & review games</p> <p>Techniques to test/check the technical properties of digital games</p> <p>Techniques to review the fitness for purpose of a Game Design Document (GDD).</p>	<p>Pupils will learn:</p> <ul style="list-style-type: none"> • The structure, content and use of test plans, checklists and success criteria • How to record test results and how and when to retest • How and why to test iteratively both during production and post-production • Planning and carrying out a range of functionality tests to make sure digital games function as intended • The importance of testing each variable as it is amended or introduced and recording the results of tests/keeping test logs • Carrying out retests and using version control to rollback features to earlier states where necessary • Determining acceptable glitches or errors and how to prioritise fixing errors or correcting programming where tests have failed • Strengths and weaknesses of 	<ul style="list-style-type: none"> • identify software features needed for the creation of a game (e.g. use of libraries, drag and drop, object) • properties, event and actions, triggers, collisions) • use geometric parameters to manipulate objects and environments (e.g. conversion, scale, creation, grid) • settings, spatial relationships) • edit properties to set parameters of objects and environments (e.g. names, transparency, visibility, effects, colour, textures) • import assets (e.g. graphics, image, texture, sound, video, animation, text) • set up interaction (e.g. collision, triggers, activating an object, behaviours, pop-up messages, shake, fades and sounds) • create game-play controls (e.g. mouse/keyboard, dialogue activation, start/pause/exit facilities) • use algorithms in relevant areas (e.g. scoring systems, timing systems, game triggers, speed) • review a digital game against a specific brief • test a digital game with a client or focus group • identify areas for improvement and further development of a digital game 	<p>Resources are introduced, and demonstrated to pupils visually initially, then pupils begin to develop individual skills supported by framework of tasks delivered over Google Classroom.</p> <p>https://www.clickteam.com/clickteam-fusion-2-5</p> <ul style="list-style-type: none"> • Trigger • Event • Action • Frame editor • Event editor • Storyboard editor • Path movement • Sideways shooter • • Numeracy – use of coordinates, angles, timings, frequency. • • Target audience, purpose, requirements. <ul style="list-style-type: none"> • Importance of computer programming/coding skills, opportunities in career development. • Discussion about game design as career choice, importance of game design industry in south Warwickshire area. 	<ul style="list-style-type: none"> • All R099 activities are assessed through continual assessment, based on exam board assessment criteria. 	<p>Additional support for both SEND & PP provided where required. Classroom activities preparing for controlled coursework are all structured through online, Google Classroom learning logs. All learning logs contain relevant framework, and supporting video content to provide additional content & cater for alternative styles of learning.</p>



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		<p><u>3.2 Improvements & further developments</u> Constraints which limit the effectiveness of digital games Further development opportunities for digital games</p>	<p>created digital games</p> <ul style="list-style-type: none"> • Comparing created digital games against concepts outlined in GDDs • Assessing the appropriateness of chosen style and approaches/conventions of GDDs and digital games for clients and target audiences • Assessing fitness for purpose of GDDs and digital games in terms of audience engagement and functionality e.g. digital games should be playable, GDDs should outline digital game concepts <p>Pupils will learn:</p> <ul style="list-style-type: none"> • How the quality of digital games is constrained by time, resources, hardware, software, budget, legislation, skills • The feasible improvements to digital games in terms of client requirements and target audience engagement • How to identify which changes to the programming, visuals and audio of digital games would make the most difference to player engagement and experience 				
Spring 2	R093 Creative iMedia in	<u>3.1 Work planning</u> Components of work plans	<p>Pupils will learn:</p> <ul style="list-style-type: none"> • The purpose of work planning 	<ul style="list-style-type: none"> • Ability to identify suitability and content of different forms of preproduction documents. 	Resources are introduced, and demonstrated to pupils visually initially, then pupils begin to	<ul style="list-style-type: none"> • External exam for unit R081 	Additional support for both SEND & PP provided where



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	<p>the media industry</p>	<p><u>3.2 Documents used to support ideas generation</u> Mind maps, moodboards</p> <p><u>3.3 Documents used to design & plan media products</u> Asset log, flow chart, script, storyboard, visualisation diagram, wireframe layout</p>	<ul style="list-style-type: none"> • Know the components of workplans • The role of workplan components in work planning • The advantages of using workplans • How workplans are used to manage time, tasks, activities and resources for individuals and large teams. <p>Pupils will learn:</p> <ul style="list-style-type: none"> • Know the purpose of each document • Know the components and conventions of each document • Know the hardware and software used to create each document • Know the users of each document • When each document is appropriate for use • What makes each document effective • How to improve the effectiveness of documents for users in given contexts <p>Pupils will learn to:</p> <ul style="list-style-type: none"> • Know the purpose of each document • Know the components and conventions of each document 	<ul style="list-style-type: none"> • Able to identify why & where moodboards, mind maps, visualisation diagrams, storyboards, scripts, & wireframe layouts are used in industry situations. • Able to identify specific camera shot types, angles and movements and how these are incorporated in storyboard type documents. • Able to identify where & why specific legislation & health & safety requirements are applied in creative media projects • Able to identify the properties and limitations for different pre-production documents. 	<p>develop individual skills supported by framework of tasks delivered over Google Classroom.</p> <ul style="list-style-type: none"> • Production documents • Visualisation diagrams • properties of documents • limitations of specific document types. <p>Reference to use of copyright materials, sound files, how to use royalty free resources.</p>	<p>Pre Production skills.</p>	<p>required. Classroom activities preparing for controlled coursework are all structured through online, Google Classroom learning logs. All learning logs contain relevant framework, and supporting video content to provide additional content & cater for alternative styles of learning.</p>
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		<p><u>3.4 The legal issues that affect media</u> Legal considerations to protect individuals Intellectual property rights Regulation, certification, & classification Health & safety</p>	<ul style="list-style-type: none">• Know the hardware and software used to create each document• Know the users of each document• When each document is appropriate for use• What makes each document effective• How to improve the effectiveness of documents for users in given contexts <p>Pupils will learn to:</p> <ul style="list-style-type: none">• The purpose of, and reasons for, each legal consideration• What is required of media producers to comply with each legal consideration• The impact on individuals and media producers of media producers using and publishing inaccurate personal information• Know what is meant by intellectual property• The purpose of, and reasons for, legislation to protect intellectual property• What is required of media producers to respect intellectual property rights• How and when intellectual property can be protected				
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			<ul style="list-style-type: none"> • The implications for media producers of using copyrighted materials without permission • Know common risks and hazards in media production • What is required of media producers to mitigate health and safety risks and hazards • What risk assessments are and the purpose of risk assessments • What location recces are and the purpose of location recces 				
Summer 1	R093 Creative iMedia in the media industry	4.1 Distribution considerations Distribution platforms & media to reach audience Properties & formats of media files Image/Audion/Moving image files File compression	Pupils will learn: <ul style="list-style-type: none"> • Know the characteristics of the types of platform and media used to deliver products to audiences • The advantages and disadvantages of types of platform and media • How the characteristics of platforms affect the selection of final product file formats in given scenarios • Know what is meant by DPI/PPI • How DPI/PPI relates to resolution and image quality 	Pupils to recap content of 4.2.3 & 4.2.4, having been introduced to these principles during other coursework units.	Resources are introduced, and demonstrated to pupils visually initially, then pupils begin to develop individual skills supported by framework of tasks delivered over Google Classroom.	<ul style="list-style-type: none"> • External exam for unit R093 Creative iMedia in the media industry. 	Additional support for both SEND & PP provided where required. Classroom activities preparing for controlled coursework are all structured through online, Google Classroom learning logs. All learning logs contain relevant framework, and supporting video content to provide additional content & cater for alternative styles of learning.



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			<ul style="list-style-type: none">• The relationship between pixel dimensions and quality for different image uses• Know examples of raster/bitmap and vector image files• The properties and limitations of uncompressed and compressed (lossy, lossless) file formats• The properties and limitations of raster/bitmap and vector static image file formats• How file format choice relates to use and context• Know what is meant by sample rate and bit depth• How sample rate and bit depth relate to sound quality• What audio compression is and how it affects quality• The properties and limitations of uncompressed and compressed (lossy, lossless) file formats• How file format choice relates to use and context• Know what is meant by frame rate• Know what is meant by SD, HD, UHD, 4K, 8K• How frame rate affects the quality of a product				
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			<ul style="list-style-type: none">• Know examples of digital video and animation files• The properties and limitations of video and animation file formats• The properties and limitations of uncompressed and compressed (lossy, lossless) file formats• How file format choice relates to use and context• Know what is meant by lossy compression• Know what is meant by lossless compression• Why lossy and lossless compression are used				
Summer 2							