

Tech-level Assignment Brief

External Assignment Front Sheet (EAF)

LEVEL 3 TECHNICAL LEVEL ENTERTAINMENT TECHNOLOGY

UNIT 6-3D CHARACTER ART L/507/6615

Learner name:	
Centre name:	
Centre number:	
Tutor name:	
Assignment Title: <i>(Please indicate)</i>	Exient

Learner Authentication

I confirm that the work and/or the evidence I have submitted for this assignment is all my own. I have complied with my tutor's instructions and the notes in the 'Information for candidates'.

Learner Signature:

Date:

I confirm that the learner's work is all their own work. I have fully complied with the rules of the assessment contained in the 'Guidance notes for tutors' document.

Tutor Signature:

Date:

Note: you must attach this completed front sheet to the candidate's assignment before dispatch to AQA for assessment. Candidate's work will not be assessed without a fully completed front sheet accompanying each candidate assignment.

GUIDANCE NOTES FOR TUTORS

These notes must be read by tutors delivering this external assessment to learners. You must not begin delivering this external assignment before reading these notes.

You must explain the way in which the external assignment is conducted (i.e. Section 2 'Delivering the external assignment') to your learners before commencing the assignment.

1. Understanding the materials

- a) There are two assignments for this unit each academic year. These are referred to as Assignment A 2016/17 and Assignment B 2016/17.
- b) The dispatch of these assignments will always be accompanied by these guidance notes, which are exclusively for tutors, and 'Information for learners' notes which are exclusively for learners, and which must be read by the learners prior to them undertaking any aspect of the external assignment.
- c) Both assignments are live for tutors to use with learners from the point at which they are received by centres. AQA will publish dates annually on the AQA website (www.aqa.org.uk) when the assignment materials will be available to centres.
- d) Whilst centres and learners may commence work on the assignment from the point at which the materials are live, they are not required to commence work on the assignment at this point. Tutors should plan an appropriate approach to the delivery of the assignment that takes into account when the assignment becomes available and when completed learner work is required by AQA for submission.
- e) There are two assessment windows each year for the submission of learner work. These windows are in January and June of each year, and full details of the dates of each window can be found annually on the AQA website (www.aqa.org.uk).
- f) You are free to submit learner work for either or both external assignments at each assessment window. Learners submitting work for the January assessment window who then need or wish to re-sit an external assignment in the same academic year must take the alternative assignment (i.e. where the learner takes assignment A in January and fails the assignment, they must take assignment B in June - the same assignment cannot be taken twice by the learner).
- g) External assignments are published annually and expired external assignments (i.e. those used in previous years) may not be used after the academic year for which they were intended.
- h) We would expect learners to spend no longer than **20 hours** in total on the external assignment.
- i) The external assignment is best delivered from the point at which key topics have been well covered and the learner has a developing sense of the main themes of the unit. Ideally, the different phases of the assignment should be broken down into regular weekly sessions and delivered continuously (i.e. week by week) across the period given over to the assessment.

2) Delivering the external assignment

The following instructions cover the two periods of the assessment process:

- Preparation time
- Assignment completion time

a) Preparation time is the time that the learner is allowed to spend undertaking preparation towards the completion of the external assignment tasks. **No assignment task can be completed during this time.**

- Before commencing preparation time, tutors should introduce learners to the assignment and the '**Information for learners**' document (accompanying these guidance notes) that identifies the rules surrounding learner research and independent working. Learners should be introduced to the idea that prior to submission of any assignment they will be required to sign the External Assignment Front Sheet (EAF) to say that they have complied fully with the rules of the administration of the assignment.
- Before preparation time, tutors should also introduce learners to any relevant techniques/concepts that the learners will need during preparation. This might include: research skills, planning and time-management skills. Tutors should discuss with learners the way in which all referencing of quotations identified through research should be undertaken. The learners should be using a clear and consistent approach for attributing quotations to books, websites etc.
- During preparation time, learners should undertake any research necessary to the assignment tasks. During this time, learners can have unlimited access to electronic and printed resources within the learning environment and can communicate and work with other learners (e.g. work in groups). Learners can also carry out research outside of the learning environment (e.g. use the internet at home).
- Learners should avoid gathering significant amounts of unnecessary research materials and, instead, be focused on the relevant materials for the achievement of the assignment. The research material can include the preparation of background/research notes, but **not** include prepared answers to tasks.
- Where learners work with others, tutors should ensure that learners are building their own research information and still working independently. Where work is undertaken outside the learning environment, tutors should ensure that this work is directed (e.g. homework set in relation to a specific item of research).
- Research gathered during this stage of the assignment does **not** count directly towards an assignment task, and tutors are required to ensure that learners confine their preparation to research and **not** the tasks of the assignment.
- During preparation time, tutors can assist learners with both organising their approach to research and their progress with their research. This should only mean that the tutor advises on the learner's research progress at a general level and in the broadest terms. Tutors must not organise and carry out learners' research for them.
- If a learner is absent for a preparation session, then the learner should be given the opportunity to carry out the preparation missed. This may be with another group at a different time.
- To ensure that preparation time has been conducted appropriately, tutors will be required to confirm before all learner work is sent to AQA for assessment that each learner has undertaken the preparations for the assessment appropriately and in accordance with these rules.

b) Assignment completion time is the time that the learner is allowed to spend writing their responses to the assignment tasks. No further research must be undertaken during this time.

- Prior to the assignment completion time, learners will organise their research and findings. Learners should identify only the research findings relevant to the tasks in hand and use this during the assignment completion time. Once the learner has commenced assignment completion, no additional research documentation will be permitted into the process. The learner will leave their research documentation with their tutor at the close of each session and will not be permitted to bring in additional research/notes at further sessions.
- Research findings can be paper-based and/or electronic (e.g. via a portable USB device). Where findings are held on a centre's internal computer network, then steps must be taken to ensure that only those files designated by the learner as their formal preparation can be accessed during the assignment completion time.
- Learners should word process the assignment tasks, although, where necessary, learners can handwrite their responses (legibly in blue or black ink). Any key research findings carried out during the research stage can be included in the final assignment as an appendix, although this must be specifically referred to in the main body of the work or it will be disregarded and not assessed.
- Tutors must ensure that during assignment completion time all work on tasks is completed within the learning environment and that learners work entirely independently of interaction with other learners. No tutor assistance should be provided and there should be no access to email, the internet or mobile phones.
- Assignment completion time will run across a number of sessions and at the close of each session, while work is on-going, the learner and tutor must ensure their work is stored securely until the next session.
- Where the assignment identifies a word limit, this is provided purely as a guide for learners. There is no penalty for exceeding this limit.
- To ensure that assignment completion time has been conducted appropriately, learners and tutors will be required to confirm before all learner work is sent to AQA for assessment that each of the learners has undertaken the assessment appropriately and in accordance with the rules.

3) Storing materials

- a) Materials for each assignment must be kept unopened and in secure storage until the date upon which the centre wishes to commence work on the assignment with learners.
- b) Secure storage is defined as a securely locked cabinet or cupboard, or a secure drive.
- c) Learner work must be securely stored once the assignment completion time has commenced and tutors are required to retain learner work plus learner research documentation until the next session.
- d) Where learner's work (both research documentation and assignment tasks) is in an electronic format, centres must take steps to ensure that they meet the requirements for secure storage described above. This may involve collecting USB memory sticks for secure storage between sessions or restricting candidates' access to specific areas of the centre's IT network.
- e) As a general rule, learners should use the IT facilities provided by their centre. Where learners wish to/are required to use their own computers, then the centre is responsible for establishing and implementing a procedure to ensure compliance with the requirements for secure storage described above.

4) Submitting assignments

- a) Full details of how learner work should be submitted to AQA for assessment can be found in the AQA Centre Administration Guide for Technical and Vocational Qualifications (www.aqa.org.uk)
- b) Completed assignments must be submitted to the appointed AQA external assessor by the date identified on the AQA website.
- c) Each learner assignment must be submitted with an 'External Assignment Front Sheet' (EAF) which can be found at the front of the assignment brief. The EAF records key personal details of the learner's work and also acts as authentication of the assignment being the learner's own work. The learner and the tutor are required to sign the front sheet declarations prior to work being dispatched to AQA for assessment.
- d) Work received after the closing date for an assessment window will not be marked by AQA.
- e) Tutors must take care to ensure that the following materials are submitted:
 - a list of learners for whom assignment work is included
 - for each learner, an 'External Assignment Front Sheet' (EAF) (with completed declarations)
 - each learner's assignment
- f) All other external assignment materials must be kept secure until after publication of results for the June assessment window.

5) Suspected malpractice

Where tutors suspect that the work produced by the learner is not their own, then this is potential malpractice and the tutor must consult their examinations officer. Guidance on malpractice is contained in the JCQ document: 'Suspected malpractice in Examinations and Assessments: Policies and Procedures'.

6) Re-sits

Where the learner fails or wishes to attempt again the external assignment, they are permitted one re-sit attempt at a different assignment.

INFORMATION FOR LEARNERS

You must read this information carefully before you start your external assignment. It explains the rules you must follow to ensure that you do the assignment correctly.

If you have any questions after having read this information, then you must speak to your tutor.

1) Taking the external assignment

- a) You should read the external assignment brief fully before you start work.
- b) The time given to you for preparation will involve you researching the topic of the assignment brief.
- c) It is important that you use this time wisely to collect your findings. Depending on the task, you may work individually or as part of a group. However, the research you do towards the collection of findings must be your own work and, during this time, you will **not** be allowed to start work on the tasks of the assignment. Your tutor will monitor your progress with your research and you should keep your tutor informed of this progress.
- d) At the end of this period, your tutor will require that you finish researching and hand in to him/her all your relevant research. This is the research material that you will then use during the assignment. You will **not** be allowed to add any further material to this after the completion of the preparation time.
- e) Your tutor will explain the rules about the way in which the assignment must now be completed. Most importantly, after each session your tutor will retain your research and your work towards the assignment until the next session.
- f) Once you have completed your assignment, you should hand it in to your tutor and sign the learner declaration on the External Assignment Front Sheet. This declaration is important as it confirms that your assignment is all your own work. Your tutor will also be required to confirm this before your work is sent to AQA for marking.

2) Some general notes on completing your external assignment

- a) Where you are quoting information from a published source (e.g. book, website), then it is important that you 'reference' this source, i.e. put quotation marks around the quotation and state where it came from. You must do this for everything in your work which is not your own work. Before you start you should agree with your tutor the ways in which they require you to reference your quotations.
- b) Remember – if you copy the words or ideas of others and don't show your sources in references, this will be considered as cheating and could have serious consequences for your result in this unit and your overall qualification.
- c) You must meet the deadlines that your tutor gives you. Remember – your tutors are there to guide you. Although they cannot give you direct assistance with the assignment tasks, they can help to sort out any other problems (e.g. lost work) before it is too late.
- d) Take care to keep your work safe. Don't leave it lying around where others can find it. You must always keep your work secure and confidential whilst you are preparing it. If it is stored on the computer network, keep your password secure. Collect all copies from the printer and destroy those that you don't need!
- e) Please never be tempted to plagiarise someone else's work. Plagiarism involves taking someone else's words, thoughts or ideas and trying to pass them off as your own. It is a form of cheating which is taken very seriously. There are many ways to detect plagiarism and there are serious penalties for learners who are caught.
- f) Above all else – remember, this is your qualification so it needs to be your own work.

LEVEL 3 TECHNICAL LEVEL

ENTERTAINMENT TECHNOLOGY

UNIT 6-3D CHARACTER ART L/507/6615

Sample External assignment – Exient

TVQ01025

Note to candidates:

- 1) Before starting your external assignment, please ensure that you have read the Information for Candidates document which explains the important rules and guidance you must follow in taking the assignment.
- 2) Carefully read the following documents before starting your research:
 - Assignment brief;
 - Task overview
 - Tasks 1-4 requirements

ASSIGNMENT BRIEF

A character artist takes a concept through to fruition, under the supervision of a client specification and the art director. Specialist software packages are used in the creation of such characters and during the modelling process the artist must take into account all technical constraints of the game such as polycount and storage capacity. They must also understand modelling with clean edge loops to ensure correct topology for animation. Understanding which texture maps are necessary or applicable to the given format they are working with, be that console, PC or mobile.

This assignment will take approximately 20 of the 90 guided learning hours available for this unit.

The assignment includes four tasks: Understand 3D modelling principles for video games, Prepare pre-production for 3D character modelling, produce a 3D character model and Render final character model and evaluate the process. The context has been selected such that the pre-production and production could be carried out using only resources referred to in the specification, ie without the need to purchase additional specialist software.

TASK OVERVIEW

Within this assignment you will design and 3D model a character for a real time video game on a mobile platform. This must meet the following specification:

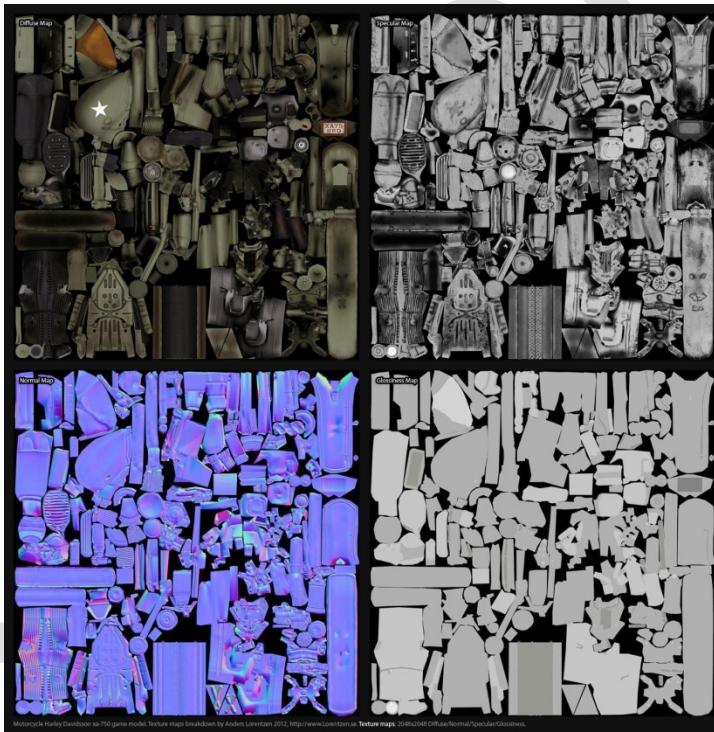
1. Pre-production - annotated sheet of research and references for a game character related to industry brief
2. Creation of **six** silhouettes for the character design
3. Must not exceed the polygon (triangle) count of 20,000
4. Be textured using no more than **three** 2048 x 2048 pixels squared texture sheets (1x diffuse - which you may choose to include an alpha channel, 1x spec, 1x normal)
5. Correct orientation and position (0,0,0)
6. Correct scale for character height, relative to human. (One meter = One unit in the Unity engine)

Task 1: PO1 Understand 3D modelling principles for video games

(2 hours)

In this task you must:

- a) Identify **three** hardware and **three** software requirements for 3D modelling for games **(P1)**. For each requirement describe how it assists the artist in their daily routine.
- b) Describe the geometric theory and subject terminology used by 3D artists, ensuring you explain what each of the following terms mean **(P2)**:
 - Vertex
 - Edge
 - Face
 - Mesh
- c) Describe the **four** texture types below and their uses within video games today. **(P3)**



- d) Describe the role of a 3D character artist in video games, with respect to their job role, duties and average salary **(P4)**
- e) Analyse the differences and similarities between modelling characters for AAA and mobile platform. **(M1)**
- f) Evaluate how the following can constrain a 3D character artist's creative flow **(D1)**:
Client brief, target audience, poly/tri limits, texture resolution limitations, legal issues, ethical issues

Task 2: PO2 Prepare pre-production for 3D character modelling**(6 hours)**

In this task you must:

- a) Using the client specification at Appendix A, prepare a technical document describing the technical constraints, target audience and legal/ethical considerations for your character design. **(P5)**
- b) Produce a brainstorm and a minimum of **six** initial sketches/silhouettes for a character design that meets the requirements of the client specification at Appendix A **(P7)**. To expand, introduce value and colour to **three** designs. **(M2)**
- c) Generate annotated research and referencing for the character **(P6)**
- d) Using traditional or digital techniques, create an A3 turnaround sheet (line drawing) for the final character design. **(M3)** To enhance turnaround sheet from M3 by adding value and colour to the character turnaround. **(D2)**

Task 3: PO3 Produce a 3D character model for a video game **(10 hours)**

In this task you must:

- a) Set up reference planes for the modelling of a character within a 3D modelling package **(P8)**
- b) Model a low poly character meeting the low poly limitations in the client specification at Appendix A keeping clean topology/edge loops in place for correct deformation for animation. **(P9)**
- c) Model a high poly character meeting the high poly limitations in the client specification at Appendix A **(M4)**
- d) Choose one character and unwrap the character mesh for texturing and generate a diffuse texture. **(P10)** Expand on the texturing process by generating **two** additional maps (eg specular, normal, alpha, ambient occlusion) **(M5)**

Task 4: PO4 Render final character model and evaluate the process**(2 hours)**

In this task you must:

- a) Render the character model taking into consideration camera placement and lighting. **(P11)** Expand on this by rendering a turntable animation of final character, again consider the placement of camera and lighting. **(M6)**
- b) Evaluate character development process from concept through to final creation. **(D3)**

APPENDIX A

As one of the world's leading independent video game developers, Exient develops both original and contract (license/conversion) titles for publication on consoles, handheld devices and mobile platforms using our in-house, cross-platform technology XGS. Over the last 10 years we have grown considerably, producing quality games for every major hand-held platform and more recently expanding into the mobile market.

Our vision today is to build superb games with deep and rewarding experiences on multiple devices, serviced by our superbly creative and talented development teams, to listen to our audience and respond with meaningful updates and compelling content. We love games and we love the new broad horizon that free-to-play and multi-device gaming offers games players world-wide..

Summary of Client Brief

Exient are developing a stylized 3rd person action adventure game. The setting is the present day following the shipwreck of a sailing boat on a desolate island.

The focus of the game is the experience of an everyday person in extraordinary circumstances. Instead of fighting, the narrative focuses more on survival and exploration. The player journey takes in an abandoned whaling station from the 1930s (see *Appendix 1*), a network of caves on the cliff side, a pine forest and the ruin of a monastery from the middle ages - and this is just the beginning.

We would like you to develop a character model for the hero for this game.

When considering the design of the character take into account how they found themselves in this situation, what clothing and equipment did they salvage from the wreckage? The appearance of the character should reflect the journey they've undertaken and what they might have collected since arriving on the island. Have they modified anything?

Elements to consider in the character design:

- Some means of carrying equipment
- An improvised tool
- Repaired or damaged clothing
- Any visible injuries

Model brief should allow a variety of surface types(eg metal, plastics, leather, cloth, skin)

DELIVERABLES

Pre-Production	
Annotated character mood board, referencing and research	P6 - Generate an A4 page of annotated research and references for a game character related to P5 and to client specification
Brainstorm / Sketches / Silhouettes	P7 - Produce a brainstorm and a minimum of six initial sketches/silhouettes for a character design that meets the requirements of the client specification M2 - Expand on initial ideas and silhouettes produced for P7 by introducing value and colour to three designs
Model Turnaround sheet	D2 - Create a turnaround sheet from adding value and colour to the character turnaround
Technical / legal restraints for client brief	P5 - Prepare a technical document describing the technical constraints, target audience and legal/ethical considerations for your character design
Production	
Use reference planes for modelling	P8 - Set up reference planes for the modelling of a character within a 3D modelling package
Model a low poly character for mobile platform (5,500 tris). Model should be aligned to the ground at 0,0,0. Orientation - the model should be facing -z with the world axis set to y up	P9 - Model a low poly character meeting the requirement of the client brief, keeping clean topology/edge loops in place for animation purposes
Model a high poly character for console or PC platform (20,000 tris). Model should be aligned to the ground at 0,0,0 . Orientation - the model should be facing -z with the world axis set to y up	M4 - Model a high poly character meeting the requirements of the client brief, keeping clean topology/edge loops in place for animation purposes
Unwrap and texture the character using an albedo / diffuse texture. Texture limits: Mobile - 1024x1024 Console/PC - 2048x2048	P10 - UVW unwrap character for texturing and generate a diffuse/albedo texture
Add to the texturing additional maps for detail. (Specular, Normal, Alpha, Metalness, Ambient Occlusion)	M5 - Expand on the texturing process by generating two additional texture maps. (Specular, Normal, Alpha, Metalness, Ambient Occlusion)

Character Bio Template

Character Name	
Nickname / Alias	
Date of Birth	
Place of Birth	
Height	
Handedness	
Role in the story	
Key relationships	
Work history	
Skills	
Phobias/fears	
Bad habits/vices	
Quirks	
Best qualities	
Worst qualities	
Goals and motivations	



PRODUCTION Nightfall

MILESTONE Pre_Production_01

REVIEW STATUS Approved

High Level Visual Styleguide - Island verticalslice, moodboard

xient

APPENDIX 2

Example Character Turnaround



Example turnaround sheet by Levi Thompson
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