Tech-level Assignment Brief

External Assignment Front Sheet (EAF)

LEVEL 3 TECHNICAL LEVEL ENTERTAINMENT TECHNOLOGY

UNIT 5-3D ENVIRONMENT ART- J/507/6614

Learner name:	
Centre name:	
Centre number:	
Tutor name:	
Assignment Title: ***(Please indicate)***	**FUNSOLVE**

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 5-3D ENVIRONMENT ART- J/507/6614

Sample External assignment – Funsolve

TVQ01022 TVQ01023 TVQ01024 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

An environment 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 environments 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 efficiency. 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: Demonstrate an understanding of modelling techniques, Demonstrate an understanding of texturing techniques, Present a finished environment building, and critically review and apply optimisation techniques to created assets.

The assignment brief provides a context for the production and design through a client specification created by industry stating the desired outcomes. The context has been selected such that the production could be carried out using only resources referred to in the specification, i.e. without the need to purchase additional specialist software.

TASK OVERVIEW

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

1. Creation of **six** 3D modelled objects, **three** using polygon modelling techniques and **three** using spline modelling techniques. **Three** of these models should demonstrate management of tri counts to the client specification at Appendix A. These **three** models should each have a model sheet rendered showing wireframe, smoothing groups and a lit render.
2. Creation of **ten** modelled assets which together form a modular building pack which adheres to the client specification at Appendix A.
3. Be textured using PBR texturing techniques and adhering to the client specification at Appendix A.
4. Creation of **three** different foliage assets for the modular building pack.
5. Correctly light the scene using a skybox and additional lights demonstrating lighting theory, colour and shadow.
6. Render a camera flythrough and turntable making use of composition and correct camera placement, upload this video to Youtube.
7. Analysis and evaluation of all assets and textures created. Giving suggestions for improvements, using paint overs and making an online post reviewing your own work (300 words).

Task 1: PO1 Demonstrate an understanding of modelling techniques

(5 hours)

In this task you must:

a) Model **six** objects using **three** different polygon modelling techniques (box, edge, polygon detailing) and **three** different spline modelling techniques (lathing, lofting, tangents). **(P1, P2)**

b) Using the **three** polygon modelled objects, optimise each one showing management of tri counts adhering to the client specification. **(M2)**

c) Unwrap the **three** polygon modelled objects and create at least one PBR texture set including a normal map for each asset. **(P5, M3)**

d) Produce a render sheet for the **three** polygon modelled objects. The sheet should include wireframes, smoothing groups and a lit render. **(M1)**

Task 2: PO2 Demonstrate an understanding of texturing techniques

(10 hours)

In this task you must:

a) Using the client specification at Appendix A, create a modular building pack of **ten** assets. Each model should demonstrate grid snapping, correct pivot points, symmetry and modularity theory. **(P3)**

b) Unwrap and create a PBR texture atlas for the **ten** assets. The texture atlas should demonstrate use of material ID's, sub object materials and multiple tiling materials. **(P4, P6)**

c) Create **three** different FX textures including an emissive, decal and opacity map for use with assets within the modular building pack.**(M4)**

d) Create **three** different foliage assets for the modular building pack ensuring you adhere to the client specification (Appendix A) **(D1)**

Task 3: PO3 Presentation of final environment building (5 hours)

In this task you must:

a) Using the grid and snap techniques, layout the modular building pack to create a completed building which adheres to the client specification at Appendix A **(P7)**

b) Create a lighting to present the completed building, colour intensity and shadow should all be carefully considered. To achieve distinction criteria you should also create a skybox. **(P8, D2)**

c) Create a camera turntable and camera flythrough of the completed building. This should make use of composition, camera placement and camera animation. The final rendered animation should be uploaded to a video host such as YouTube. **(P9, M5)**

Task 4: PO4 Review and optimisation techniques (5 hours)

In this task you must:

a) Create a document which analyses and reviews the entire project. In particular this document should contain:

- A review of the tiling textures and atlases created in Task 1(a) and Task 2(b). This should also be uploaded to an online forum post. **(P10)**
- Well-presented assets with annotation showing understanding of modelling and texturing techniques used across all assets. **(P11)**
- A final analysis of the completed modular building with renders posted to an online forum.**(M6)**
- An evaluation including paint over of the completed building suggesting where improvements could be made. **(D3)**

APPENDIX A

Funsolve

sync. Project Brief

Prepared for: Artists & Designers
Prepared by: Richard Tawn, Funsolve Limited

About

Funsolve are a new company dedicated to the design and development of exceptional gaming experiences on mobile, console and using VR. A new organisation, Funsolve are comprised of experienced and talented individuals seeking to make the world a better place through their games and applications which people engage with all over the world.

Funsolve

Project Overview

'Sync' is the working title of a first person VR experience and detective game in which a scientist is thrust into the past using a time gate portal being developed as part of a government black budget project. Once on the other side there is apparently no way back but a series of strange clues lead the scientist to hope that there is a possibility they can return, in the meantime they must learn to adapt to their new surroundings and avoid too many questions.

Task Brief

The game opens shortly after the entrance into the time portal. The player finds her/himself in a room that is evidently of a period that is not contemporary (see Appendix 1). The time is circa 1880 and in London. The player will not leave the room but instead explore their surroundings; therefore there will be an object or object(s) that provide clues as to the time and/or whereabouts of the player.

Target Platform: PCVR Platforms and PlayStation VR

Considerations when designing the space

- There will be some movement in the VR space but we do not want to be walking far, the player will be able to look at an object and 'pick it up' then turn it in their hands.
- Consider how you look at a room, think of the objects and decoration at your eye level and consider features that appear beyond this, lower down and high up.
- Draws and cupboards will need to be operable, unless locked - if it looks like you can open it, then this should be possible.

Technical Restraints:

- Use reference for your modelling - sketches and mood boards are ideal for this
- Model the scene using no more than 100k triangles
- Ensure modular pieces scale and transforms are reset and placed at 0,0,0 with pivot point in an appropriate position for the object (e.g. a lamp would have its pivot at the base; a wall might have its pivot in one consistent corner for snapping)
- Individual assets should use no more than 5k triangles
- Texture resolution limit is 2048 x 2048
- Lighting setup can be either day or night

APPENDIX 1