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Oxford Cambridge and RSA

Set assignment

DRAFT

LEVEL 3 CAMBRIDGE ADVANCED NATIONAL (AAQ) IN

COMPUTING: APPLICATION DEVELOPMENT

Extended Certificate H129

For first teaching in 2025

F165: Immersive technology solution development

Introduction

This is Sample Assessment Material (SAM). It is an example set assignment that we publish alongside a new specification to help illustrate the intended style and structure of our set assignments.

During the lifetime of the qualification, updates to the set assignment template may happen. We always recommend you look at the most recent set of past set assignments where available.

Tell us what you think

Your feedback plays an important role in how we develop, market, support and resource qualifications now and into the future. Here at OCR, we want teachers and students to enjoy and get the best out of our qualifications and resources, but to do that we need honest opinions to tell us whether we're on the right track or not. That's where you come in.

You can email your thoughts to **ProductDevelopment@OCR.org.uk** or visit the **OCR feedback page** to learn more about how you can help us improve our qualifications.

Designed and tested with teachers and students

Helping young people develop an ethical view of the world

Equality, diversity, inclusion and belonging (EDIB) are part of everything we do

Summary of updates

Date	Version	Page number	Summary of change
July 2023	1 DRAFT	All	Creation of document

Teacher support

We have a range of support services to help you at every stage, from preparation to delivery.

Our teacher support is designed to make teaching our qualifications straightforward, whether you are an experienced teacher, new to teaching, new to OCR, or not a subject specialist of the qualification you are teaching.

We offer free access to services such as Access to Scripts, ExamBuilder and ActiveResults, and you'll find comprehensive teaching resources and a range of professional development courses on our teacher website, Teach Cambridge.

Our OCR subject advisors provide support and information to centres, including:

- Specification and non-exam assessment advice

- Updates on resource developments and training opportunities

- Information on our subject networks giving an opportunity to share ideas and expertise.

Further help and support

Visit our subject pages to find out more about the assessment and request trial access to **Teach Cambridge**.

Not a registered or approved OCR centre? Discover the benefits of becoming one on the **OCR website**.

Have more questions about teaching OCR qualifications? Explore our **Online Support Centre** or contact our **Customer Support team**.

Contact details are available on the **final page** of the SAM.

Work with us

As one of the major UK exam boards, OCR is responsible for creating and marking exams taken by over a million students each year. We work with over 10,000 professionals to create, check, mark and moderate our assessments.

If you would like to find out more about becoming an OCR examiner, please visit **our website** for more information.

People and planet

OCR is part of Cambridge University Press & Assessment, which has clear commitments to champion sustainability, diversity, trust and respect for our people and planet.

We are committed to supporting a curriculum that helps young people develop an ethical view of the world. This enables them to take social responsibility, understand environmental issues and prepare them for the green jobs of the future.

Our equality, diversity, inclusion and belonging principles are that we:

- are respectful and considerate

- celebrate differences and promote positive attitudes to belonging

- include perspectives that reflect the diverse cultural and lifestyle backgrounds of our society

- challenge prejudicial views and unconscious biases

- promote a safe and supportive approach to learning

- are accessible and fair, creating positive experiences for all

- provide opportunities for everyone to perform at their best

- are contemporary, relevant and equip everyone to live and thrive in a global, diverse world

- create a shared sense of identity in a modern mixed society with one humanity.

To learn more, including our work on accessibility in our assessment materials, visit our People and planet page.

OCR-set Assignment

Sample Assessment Material

OCR Level 3 Cambridge Advanced National (AAQ) in Computing: Application Development (Extended Certificate)

Unit F165: Immersive technology solution development

Scenario Title: School curriculum area marketing

This is a sample OCR-set assignment which should only be used for practice**.**

This assignment **must not** be used for live assessment of students.

The live assignments will be available on our secure website, 'Teach Cambridge'.

The OCR administrative codes linked to this unit are:

- unit entry code   F165

- certification code   H129

The regulated qualification number linked to this unit is: TBC

Duration

About 15 hours of supervised time (GLH)
(work that **must** be completed under teacher supervised conditions)

Contents

Information and instructions for Teachers

Using this assignment

This assignment provides a scenario and set of related tasks that reflect the development of an immersive technology solution prototype for a specific purpose based on a set of client requirements.

The assignment:
- Is written so that students have the opportunity to meet the requirements of all assessment criteria for the unit.
- Will tell students if their evidence must be in a specific format. If the task does not specify a format, students can choose the format to use.
- **Must** be completed under teacher supervision. Any exceptions to this will be stated in the assessment guidance.

You **must**:
- Use an OCR-set assignment for summative assessment of students.
- Familiarise yourself with the assessment criteria and assessment guidance for the tasks. These are given at the end of each student task. They are also with the unit content in **Section 4** of the Specification.
  Assessment guidance is only given where additional information is needed. There might not be assessment guidance for each criterion.
- Make sure students understand that the assessment criteria and assessment guidance tell them in detail what to do in each task.
- Read and understand **all** the rules and guidance in **Section 6** of the Specification **before** your students start the set assignments.
- Make sure that your students complete the tasks and that you assess the tasks fully in line with the rules and guidance in **Section 6** of the Specification.
- Give your students the **Application Development Student guide to NEA assignments before** they start the assignments.

You **must not**:
- Use live OCR-set assignments for practice or formative assessment. This sample assessment material **can** be used for practice or formative assessment.
- Use this sample assessment material for live assessment of students.
- Allow group work for **any** task in this assignment.
- Change any part of the OCR-set assignments or assessment criteria.

Pages 1-4 are for teachers only. Please do **not** give **Pages 1-4** to your students.
You can give **any** or **all** of the pages **that follow** to your students.

Sample

Tasks for students and assessment criteria

Unit F165: Immersive technology solution development

Scenario Title: School curriculum area marketing

Scenario

Your school management team is planning an open evening which showcases the facilities, resources and courses offered for sixth form students.

The management team is concerned that over the last few years, attendance at open evenings by prospective students and their parents has been in decline.

To widen the reach and appeal of the open evening, the school management team want to offer an immersive technology solution to enhance the open evening experience. The solution is to be developed using AR, VR or MR. It must be appropriate **either** for students and parents that attend in person **or** for students and parents that cannot, or choose not to, attend in person.

You have been asked by the school management team to choose a curriculum area and to showcase it by developing a high-fidelity immersive technology prototype.

The school management team have the following requirements for the immersive technology prototype:

- Students and parents must be able to move around to access information about the chosen curriculum area
- It must showcase of the facilities and resources of the chosen curriculum area.
- It must include details of the post 16 qualification(s) offered by the chosen curriculum area.
- It must include examples of students sharing their experiences of the chosen curriculum area.

The school management team have asked that the immersive technology prototype uses a range of assets and is accessible to students and parents using an appropriate device.

Task 1

Planning and designing the high-fidelity immersive technology prototype

Topic Areas 1, 2 and 4 are assessed in this task

The task is:
Plan and design the immersive technology prototype for the chosen curriculum area. The prototype will be developed using AR, VR or MR.
You will:
- Document the requirements.
- Plan and design the immersive technology prototype.
- Describe how the immersive technology prototype will be tested.

Your evidence **must** include:
- Written evidence.
- Planning and design documentation.

Use the assessment criteria below to tell you what you need to do in more detail.

Pass	Merit	Distinction
P1: Describe the client and user requirements for the immersive technology prototype.	**M1: Explain** how the technical requirements meet the client and user requirements.	**D1: Justify** how the design for the immersive technology prototype meet the client and user requirements.
P2: Document appropriate ideas for the immersive technology prototype.		
P3: Design the layout for the immersive technology prototype.	**M2: Plan** how users will interact with the immersive technology prototype.	**D2: Discuss** how the immersive technology prototype enhances the user experience.
P4: Identify the assets required for the immersive technology prototype.	**M3: Explain** how assets will be used in combination in the immersive technology prototype.	
P5: Describe the functionality of the immersive technology prototype.		
P6: Describe how the immersive technology prototype will be tested.	**M4: Justify** the appropriateness of the testing.	

Assessment guidance

This assessment guidance gives you information to meet the assessment criteria. There might not be additional assessment guidance for each criterion. It is only given where it is needed. You must read this guidance before you complete your evidence.

Assessment Criteria	Assessment guidance
P1	• Students **must** describe both the client **and** user requirements. Students **must** expand the description into specific requirements which can be used as criteria to review against in **Task 3**. This assessment criterion **could** be evidenced in a requirements specification.
P2	• Students **must** document ideas for the immersive technology prototype based on the requirements described in P1. Students **must** use at least **one** of the tools in Topic Area 2.2. Students **must** document at least **two** ideas on a mind map, for example.
P3	• Students **must** design the immersive technology prototype using the tools in Topic Area 2.2. The designs **must** clearly show the intended layout and contain enough detail for them to be interpreted by someone who hasn't seen them before.
P4	• Student **must** identify the essential assets required for the immersive technology prototype. To achieve this criterion, students are not required to identify all non-essential assets. This assessment criterion **could** be evidenced in an assets list.
P5	• Students **must** describe the immersive technology prototype functionality required to meet client and user requirements described in P1. The description **must** include references to triggers and layers.
P6	• Students **must** describe the testing methods and testing types they will use to test the immersive technology prototype and the elements of the immersive technology prototype they intend to test. The description of how the software solution will be tested **could** include the content in Topic Area 4.1.
M1	• Students **must** explain how the technical requirements will meet the client and user requirements detailed in P1. The explanation **must** reference hardware devices and software. Where students do not achieve P1, it is still possible to achieve M1. This assessment criterion **could** be evidenced in a requirements specification.
M2	• Students **must** plan how users will interact with the immersive technology prototype. Students **could** use the planning tools in Topic Area 2.2. The planning **must** contain enough detail for it to be interpreted by someone who hasn't seen it before.
M3	• Students **must** explain how the essential assets identified in P4 will be used in the immersive technology prototype. Students **must** explain which of the essential assets will be static and which will work in combination as triggers and layers. This assessment criterion **could** be evidenced in an assets list and/or via annotations on the designs for intended layout (P3).
M4	• Students **must** justify the approach to testing detailed in P6.
D1	• There is no assessment guidance for this criterion.
D2	• There is no assessment guidance for this criterion.

Task 2

Creating the high-fidelity immersive technology prototype

Topic Areas 1 and 3 are assessed in this task

The task is:
Create the immersive technology prototype that you planned and designed in **Task 1**.

You will:
- Source assets for use in the immersive technology prototype.
- Use software tools and techniques to create the immersive technology prototype.

Your evidence **must** include:
- The final immersive technology prototype in a format which allows it to be viewed/used without the need to install any specialist software **or** video/screen recordings demonstrating the immersive technology prototype.

Use the assessment criteria below to tell you what you need to do in more detail.

Pass	Merit	Distinction
P7: **Source** assets appropriate for use in the immersive technology prototype.	**M5: Prepare** assets appropriately for use in the immersive technology prototype.	
P8: Implement layers appropriate for the immersive technology prototype.	**M6: Use** software features and techniques to combine content appropriately in the immersive technology prototype.	**D3: Create** a cohesive immersive technology prototype combining environment, assets and actions.
P9: **Implement** triggers appropriate for the immersive technology prototype.		**D4: Implement** supporting technologies appropriate for the immersive technology prototype.
P10: **Implement** user interaction appropriate for the immersive technology prototype.		

Assessment guidance

This assessment guidance gives you information to meet the assessment criteria. There might not be additional assessment guidance for each criterion. It is only given where it is needed. You must read this guidance before you complete your evidence.

Assessment Criteria	Assessment guidance

Task 2	• Ideally students will create the immersive technology prototype planned and designed in **Task 1**. However, if students deviate from the plan(s) and/or design(s) they should not be penalised when assessing **Task 2**.
	
	• To confirm assessment decisions made for this task, the OCR assessor will need to be able to see the final immersive technology prototype. Therefore, students **must** provide either:
	   ○ The final immersive technology prototype in a format which allows it to be viewed/used without the need to install any specialist software.
	   ○ Video/screen recordings of the final immersive technology prototype being demonstrated.
	
	• Some software will output the immersive technology prototype, online, with a QR code to access it. In this case students **must** produce a video demonstrating the immersive technology prototype as a QR code to an online version is not suitable evidence.

P7	• Students **must** source assets for use in the immersive technology prototype. The assets sourced must be appropriate for the requirements detailed in the scenario. The final immersive technology prototype will be sufficient evidence for this assessment criterion.
P8	• Students **must** add layers to the immersive technology prototype, so it functions as intended. Students **must** use the software features and techniques in Topic Area 3.2. The final immersive technology prototype will be sufficient evidence for this assessment criterion.
P9	• Students **must** add triggers to the immersive technology prototype, so it functions as intended. Students **must** use the software features and techniques in Topic Area 3.2. The final immersive technology prototype will be sufficient evidence for this assessment criterion.
P10	• Students **must** add user interaction to the immersive technology prototype, so it functions as intended. Students **must** use the software features and techniques in Topic Area 3.2. The final immersive technology prototype will be sufficient evidence for this assessment criterion.
M5	• Students **must** prepare **all** assets sourced in P7, so they are appropriate for use in the immersive technology prototype. Topic Area 3.1 has examples of techniques students could use to prepare assets**.** The final immersive technology prototype will be sufficient evidence for this assessment criterion.
M6	• Students **must** combine content so there is a smooth transition from one item to another using the software features and techniques in Topic Area 3.2. The final immersive technology prototype will be sufficient evidence for this assessment criterion.

Assessment Criteria	Assessment guidance
D3	• Students **must** create an immersive technology prototype where the assets and actions work cohesively together to form the immersive environment. The immersive technology prototype **must** function as intended and meet the requirements of the scenario. Students **must** use the techniques in Topic Area 3.1 and software features and techniques in Topic Area 3.2. The final immersive technology prototype will be sufficient evidence for this assessment criterion.
D4	• Students **must** implement at least **two** of the supporting technologies in Topic Area 1.2.4. The final immersive technology prototype will be sufficient evidence for this assessment criterion.

Task 3

Testing and reviewing the high-fidelity immersive technology prototype.

Topic Areas 4 and 5 are assessed in this task.

The task is:
Test and review the immersive technology prototype that you created in **Task 2**.

You will:
* Test the immersive technology prototype using the testing described in **Task 1**.
* Review the immersive technology prototype.

Your evidence **must** include:
* Documented test results.
* Written evidence.

Use the assessment criteria below to tell you what you need to do in more detail.

Pass	Merit	Distinction
P11: Test the immersive technology prototype and document results.	**M7**: **Analyse** test results documenting any required remedial action.	**D5: Discuss** potential improvements and further development opportunities.
P12: Assess the suitability of the immersive technology prototype for meeting the requirements.		

Assessment guidance

This assessment guidance gives you information to meet the assessment criteria. There might not be additional assessment guidance for each criterion. It is only given where it is needed. You must read this guidance before you complete your evidence.

Assessment Criteria	Assessment guidance
P11	• Students **must** test the immersive technology prototype and document results. Ideally students will use the approach described and justified in **Task 1**. However, if students deviate from the proposed testing they should not be penalised. • Students **must** have evidence of the actual test results. For example, screen shots, photographs or video/screen recordings.
P12	• Students **must** assess the suitability of the immersive technology prototype for meeting the requirements in Topic Area 5.1.
M7	• Students **must** analyse the test results generated in P11 and explain any remedial action required to resolve the issues found during testing. Students are not expected to fix errors found in the immersive prototype during final testing.
D5	• Having assessed the suitability of the immersive technology prototype (P12) and analysed test results (M7), students **must** discuss potential improvements and further developments to the immersive technology prototype.

Template for test table

Test number	Test type	Test description	Test data	Expected result	Actual result	Remedial action required

NEA command words

The table below shows the command words that may be used in the NEA assignments and/or assessment criteria.

Command Words	Meaning
Adapt	• Change to make suitable for a new use or purpose
Analyse	• Separate or break down information into parts and identify their characteristics or elements • Explain the different elements of a topic or argument and make reasoned comments • Explain the impacts of actions using a logical chain of reasoning
Assess	• Offer a reasoned judgement of the standard or quality of situations or skills. The reasoned judgement is informed by relevant facts
Calculate	• Work out the numerical value. Show your working unless otherwise stated
Classify	• Arrange in categories according to shared qualities or characteristics
Compare	• Give an account of the similarities and differences between two or more items, situations or actions.
Conclude	• Judge or decide something
Describe	• Give an account that includes the relevant characteristics, qualities or events
Discuss (how/whether/etc)	• Present, analyse and evaluate relevant points (for example, for/against an argument) to make a reasoned judgement
Evaluate	• Make a reasoned qualitative judgement considering different factors and using available knowledge/experience
Examine	• To look at, inspect, or scrutinise carefully, or in detail
Explain	• Give reasons for and/or causes of something • Make something clear by describing and/or giving information
Interpret	• Translate information into recognisable form • Convey one's understanding to others, e.g. in a performance
Investigate	• Inquire into (a situation or problem)
Justify	• Give valid reasons for offering an opinion or reaching a conclusion
Research	• Do detailed study in order to discover (new) information or reach a (new) understanding
Summarise	• Express the most important facts or ideas about something in a short and clear form

We might also use other command words but these will be:
• Commonly used words whose meaning will be made clear from the context in which they are used
• Subject specific words drawn from the unit content.

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