**OCR-set Assignment**

**Sample Assessment Material**

OCR Level 1/Level 2 Cambridge National in IT Sample Set Assignment

Unit R070: Using Augmented Reality to present information

Scenario Title: Progress African Elephant World

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 associated with this unit are:**

* unit entry code R070
* certification code J836

**The regulated qualification number associated with this unit is:**

603/7115/8

**Duration: Approximately 10-12 hours**

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Contents

[Information for Teachers 3](#_Toc99699995)

[Using this Assignment 3](#_Toc99699996)

[Scenario for the assignment 4](#_Toc99699997)

[Your Tasks and Marking Grids 6](#_Toc99699998)

[Task 1 – Designing the Augmented Reality (AR) model prototype 6](#_Toc99699999)

[Task 2 – Creating the Augmented Reality (AR) model prototype 8](#_Toc99700000)

[Task 3 – Test and review the Augmented Reality (AR) model prototype 9](#_Toc99700001)

[Marking Criteria Command Words 10](#_Toc99700002)

# **Information for Teachers**

# **Using this Assignment**

You **must**:

* Make sure you are familiar with the Assessment Guidance relating to the tasks. This is with the unit content in [Section 4](https://www.ocr.org.uk/Images/610951-specification-cambridge-nationals-it-j836.pdf) of the Specification.
* Make sure that you have read and understood **all** the rules and guidance provided in [Section 6](https://www.ocr.org.uk/Images/610951-specification-cambridge-nationals-it-j836.pdf) of the Specification **before** your students complete and you assess the set assignments.
* Make sure that completion and assessment fully adhere to the rules and guidance provided in [Section 6](https://www.ocr.org.uk/Images/610951-specification-cambridge-nationals-it-j836.pdf) of the Specification.
* Provide students with the IT [Student guide to NEA assignments](https://www.ocr.org.uk/Images/620513-student-guide-to-nea-assignments.pdf) beforethey start the assignments.
* Allow students approximately 10-12 guided learning hours (GLH) to complete all tasks.

You **must not**:

* Change or modify this assignment in any way.

You **can**:

* Change the file formats of the supplied assets to ensure that they are compatible with the software being used by your centre for creating the Augmented Reality (AR) model prototype.

## Scenario for the assignment

Progress African Elephant World

Progress African Elephant World (PAEW) is a charity for the protection of African elephants. The charity rescues wounded and orphaned elephants, and trains wardens to monitor the illegal killing of elephants for their tusks and the illegal trade of ivory. PAEW produces teaching resources for use in schools by teachers. The teaching resources help schoolchildren learn about Africa and the dangers that exist for the elephant population.

PAEW wants to produce new teaching resources that are exciting and interactive. PAEW has decided that they want to use Augmented Reality (AR) to produce a resource.

You are required to produce a **model prototype of an** **AR teaching resource**. The model prototype will be shown to PAEW to demonstrate what the final product could look like and the functionality it could include.

There are two types of African elephants:

* The Forest elephant found in the Côte d'Ivoire and Gabon
* The Savanna elephant found in South Africa and Botswana.

PAEW wants the resource to allow the schoolchildren to:

* Use the flag for each African country to allow them to access the information about that country
* Use interaction/layers to access additional content about the elephant population within the selected country
* Select the image of the elephant/text about the type of elephant within a specific country, which triggers an audio description about the elephant.

**Assets**

You have been provided with the following assets:

|  |  |
| --- | --- |
| * Botswana.png * Botswana\_Info.docx * Cote d'Ivoire.png * Cote d'Ivoire\_Info.docx * Elephant\_Population\_Botswana.png * Elephant\_Population\_Cote d'Ivoire.png * Elephant\_Population\_Gabon.png * Elephant\_Population\_South Africa.png * Forest Elephant.m4a | * Forest\_Elephant.jpg * Gabon.png * Gabon\_Info.docx * Map\_of\_Africa.jpg (Main map of Africa) * Map\_of\_Africa\_Mono.jpg (Main map of Africa) * Savanna Elephant.m4a * Savanna\_Elephant.jpg * South Africa.png * South Africa\_Info.docx |

**Note:**

In each live set assignment the assets will be provided in a range of file formats. You will then be able to select the format that is most suitable for your software. If you require any of the assets in a different format, your teacher will convert the files for you or provide you with similar assets as alternatives.

**Read through all of the tasks carefully, so that you know what you will need to do to complete this assignment.**

**Important:**

* You will need to refer to the marking criteria grid. Your teacher can explain the marking criteria if you need further clarification.
* You will need to draw upon relevant skills/knowledge/understanding from other units you have studied in this qualification.

## Your Tasks and Marking Grids

### Task 1 – Designing the Augmented Reality (AR) model prototype

Topic Area 2 is assessed in this task.

You **must** design the model prototype for the teaching resource.

School teachers will use the resource to teach schoolchildren about Africa and the risks to the African elephants. PAEW wants the resource to be based on the map of Africa (Asset List: ***Map\_of\_Africa.jpg*** ).

You **must**:

* Analyse and explain what PAEW want the teaching resource to do and who the teaching resource is aimed at
* Design the resource to allow AR techniques for the schoolchildren to access the information
* Use design tools to design the content and action flow for the teaching resource.

Total marks for Task 1: 23 marks

**Task 1 Tips**

* You should consider the purpose of the teaching resource, the intended audience, the content, triggers, user interaction/layers
* Use the assets provided by PAEW for this task. The file format of these assets can be converted by you or your teacher so that they will work with the software you are using
* Look for opportunities for creating triggers with layers for user interaction
* Try to keep the view of the user uncluttered by hiding assets that are no longer required
* Be as creative with your ideas as possible when designing the model prototype

**Topic Area 2: Designing an AR model prototype**

|  |  |  |
| --- | --- | --- |
| **MB1: 1-3 marks** | **MB2: 4-6 marks** | **MB3: 7-10 marks** |
| **Limited** use of design tools and features used to plan the prototype, which are under-utilised for the creation of planning documentation | **Adequate** use of design tools and features used to plan the prototype, which are utilised for the creation of planning documentation | **Effective** use of design tools and features used to plan the prototype, which are fully utilised for the creation of planning documentation |
| **MB1: 1-4 marks** | **MB2: 5-8 marks** | **MB3: 9-13 marks** |
| **Limited** planning documentation analysing user requirements. Requirements are identified  **Limited** design documentation for technical development | **Adequate** planning documentation analysing user requirements. Requirements are described  **Adequate** design documentation for technical development | **Effective** planning documentation analysing and meeting user requirements.  Requirements are explained  **Effective** design documentation for technical development |

If your work does not meet Mark Band 1 criteria, you will be awarded zero marks for this task.

### Task 2 – Creating the Augmented Reality (AR) model prototype

Topic Area 3 is assessed in this task.

You **must**:

* create the model prototype of the AR teaching resource you designed in task 1
* use triggers and layers/user interaction to produce information output

Total marks for Task 2: 23 marks

**Task 2 Tips**

* Refer to your design documentation and make any changes as appropriate
* Only create a model prototype **not** the full working product
* Only use a maximum of three countries of your choice
* Use one or more types of user interaction when creating the model prototype
* Test and record the functionality of the AR model prototype during its creation
* Use video or screen video capture software of the AR model prototype being demonstrated to show how it works. Videos can be created using a smartphone, iPad, webcam, etc. This is essential for moderation purposes.

**Topic Area 3: Creating an AR model prototype**

|  |  |  |
| --- | --- | --- |
| **MB1: 1-3 marks** | **MB2: 4-6 marks** | **MB3: 7-10 marks** |
| **Limited** use of tools and features which are under-utilised for the creation of the prototype  **Basic** user interaction within model prototype | **Adequate** use of tools and features which are utilised for the creation of the prototype    **Adequate** user interaction within model prototype | **Effective** use of tools and features which are fully utilised for the creation of the prototype  **Effective** user interaction within model prototype |
| **MB1: 1-4 marks** | **MB2: 5-8 marks** | **MB3: 9-13 marks** |
| The solution allows **limited** information to be presented to the intended audience(s) in a limited manner  The solution will contain **inefficiencies** that affect the quality of the information presented  The solution will provide a **limited** user experience | The solution allows **adequate** information to be presented to the intended audience(s)  The solution will contain **inefficiencies**, but these do not affect the quality of the information presented  The solution provides an **adequate** user experience | The solution allows **effective** information to be presented to the intended audience(s)  The solution is **effective** and efficient in presenting good quality and relevant information  The solution provides an **effective** user experience |

If your work does not meet Mark Band 1 criteria, you will be awarded zero marks for this task.

### Task 3 – Test and review the Augmented Reality (AR) model prototype

Topic Area 4 is assessed in this task.

You **must**:

* carry out technical testing of the AR model prototype
* review the processes you followed to design and create the AR model prototype.

Total marks for Task 3: 14 marks

**Task 3 Tips**

* Create and complete a test plan for the testing of the prototype
* Remember that some examples of the triggers and layers/user interaction **must** work correctly to demonstrate how the final product would work
* Use the teaching content within the unit specification to help you produce your review
* Your review is not just about whether your AR model prototype meets the requirements of PAEW. It **must** also be a review of the processes you followed during the entire assignment

**Topic Area 4: Testing and reviewing**

|  |  |  |
| --- | --- | --- |
| **MB1: 1-2 marks** | **MB2: 3-4 marks** | **MB3: 5-7 marks** |
| Testing is **limited** with minimal identification of tests used and results stated | Testing is **adequate** for most aspects with results documented. Any changes made due to test results are commented upon | Testing is **effective** for all aspects with results thoroughly and completely documented. Any changes made due to test results are explained |
| **MB1: 1-2 marks** | **MB2: 3-4 marks** | **MB3: 5-7 marks** |
| **Basic** review which states what worked well and/or what did not work well | **Adequate** review which describes the effectiveness of the processes followed during the designing and creation of the AR solution  **Adequate** review which describes the effectiveness of the tools and techniques used during the designing and creation of the AR solution | **Comprehensive** review which explains the effectiveness of the processes followed during the designing and creation of the AR solution  **Comprehensive** review which explains the effectiveness of the tools and techniques used during the designing and creation of the AR solution. Describes lessons learnt |

If your work does not meet Mark Band 1 criteria, you will be awarded zero marks for this task.

## Marking Criteria Command Words

The tables below show the command words that will be used in the NEA Marking Criteria grids. They explain the type of evidence that you should expect to see to meet each command word.

**Mark Band (MB1) Words:**

|  |  |
| --- | --- |
| **Command word** | **Meaning** |
| **Basic** | * Work includes the minimum required. It is a starting point but is simplistic and not developed. * Understanding and skills are applied in a way that partly achieves the wanted or intended result, but it would not be useable without further input or work. |
| **Brief/Briefly** | * Work includes a small number of relevant facts or concepts but lacks detail, contextualisation or examples. |
| **Dependent** | * The student can perform a task when given regular assistance or help. |
| **Few** | * Work produced is restricted or narrow. It includes less than half of the information or examples expected for a full response. |
| **Inefficient** | * Outputs are produced but with great expense or effort because of poor organisation or design and not making the best use of available resources. |
| **Limited** | * Work produced is restricted in range or scope and includes only some of the information required. It evidences partial rather than full understanding. * Work produced is a starting point rather than a developed process, concept or output. |
| **Minimal** | * Includes very little in amount or quantity required. |
| **Simple** | * Includes a small number of relevant parts, which are not related to each other. |
| **Superficial** | * Work completed lacks depth and detail. |

**Mark Band (MB2) Words:**

| **Command word** | **Meaning** |
| --- | --- |
| **Adequate(ly)** | * Work includes the appropriate number of relevant facts or concepts but does not include the full detail, contextualisation or examples. |
| **Assisted** | * The student can perform a task with occasional assistance or help. |
| **Part(ly)/Partial** | * To some extent but not completely. * Work produced is inclusive in range and scope. It evidences a mainly developed application of understanding, performance or output needed. * Work produced results in a process, concept or output that would be useable for its purpose. |
| **Some** | * Work produced is inclusive but not fully comprehensive. It includes over half the information or examples expected for a full response. |
| **Sound** | * Valid, logical, shows the student has secured most of the relevant understanding, but points or performance are not fully developed. * Applies understanding and skills to produce the wanted or intended result in a way that would be useable. |

**Mark Band (MB3) Words:**

| **Command word** | **Meaning** |
| --- | --- |
| **Accurate(ly)** | * Acting or performing with care and precision. * Correct in all details. |
| **All** | * Work produced is fully comprehensive and wide-ranging. It includes almost all, or all the information or examples expected for a full response. |
| **Clear(ly)** | * Focused and accurately expressed, without ambiguity. |
| **Complex** | * Includes many relevant parts, all of which relate to each other logically. |
| **Comprehensive(ly)** | * The work produced is complete and includes everything required to show depth and breadth of understanding. * Applies the understanding and skills needed to successfully produce the wanted or intended result in a way that would be fully fit-for-purpose. |
| **Consistent(ly)** | * A level of performance which does not vary in quality over time. |
| **Critical** | * Objective analysis and evaluation in order to form: a judgement, evaluation of the evidence or effective trouble shooting/fault finding. |
| **Detailed** | * Gives point by point consideration of all the key information. |
| **Effective** | * Applies the skills required to the task and is successful in producing the desired or intended result. * The work produced is effective in relation to a brief. |
| **Efficient** | * Able to produce results or outputs with the minimum expense or effort, because of good organisation or design and making the best use of available resources. |
| **Full(y)** | * Work produced is comprehensive in range and scope. It evidences a fully developed application of understanding, performance or output needed. * Work produced results in a process, concept or output that would be fully fit-for-purpose. |
| **Independent(ly)** | * The student can perform a task without assistance or reliance on others. |
| **Justify/Justified** | * The reasons for doing something are explained in full. |
| **Most(ly)** | * Includes nearly all of what is expected to be included. |
| **Wide (ranging)** | * Includes many relevant details, examples or contexts; all of which are fully detailed, contextualised or exemplified. |

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