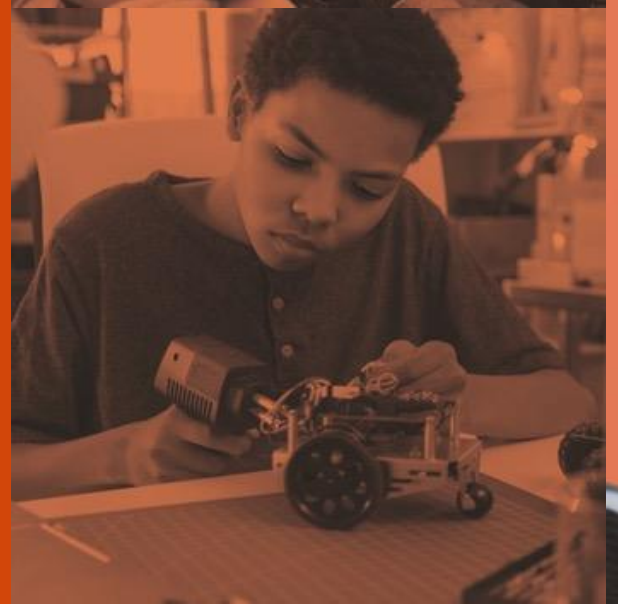
Cambridge National in IT Level 2 J836

WEDNESDAY 24TH JANUARY 2024

Included on the 2024 KS4 Performance Tables

CAMBRIDGE *NATIONALS*



OCR Level 1/Level 2

Full time vocational courses for 14-16 year olds

ocr.org.uk/cambridgenationals

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Building *brighter* futures

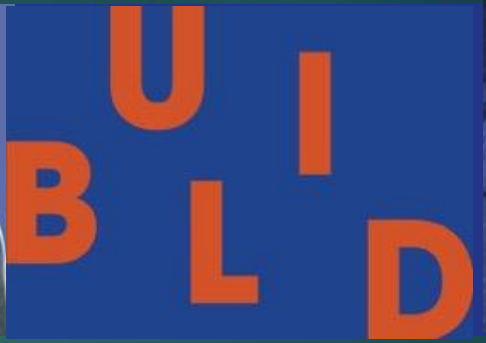
What are Cambridge Nationals?

Cambridge Nationals are exciting, **practical vocational qualifications** that can help build your future.

They are Level 1/Level 2 qualifications designed for students aged 14-16 years and complement your GCSE choices.

Cambridge Nationals will inspire and help you develop **real-world skills through practical learning** and help you get ready for your next steps whether that's A Levels, apprenticeships or a Level 3 vocational qualification such as a Cambridge Technical.

Building *brighter* futures



Features of a Cambridge National

- You'll start on the same course as your classmates
- Your final mark will determine which level you'll achieve - Level 1 or Level 2
- **Non-exam assessment (coursework) of 60%**
- **Final exam of 40%**
- The assessment process recognises your strengths.
  Good performance in some units will make up for weaker performance in others
- No requirement to get a particular grade in the external assessments to pass overall.

Building *brighter* futures

Practical skills for brighter futures

Not only do Cambridge Nationals develop core subject knowledge they also help you gain practical skills that can be applied to real-life contexts and work situations.

These skills include:

- Analytical
- Creative thinking
- Digital presentation
- Leadership
- Planning
- Planning
- Problem solving
- Research
- Team working
- Verbal

Communication/Presentation

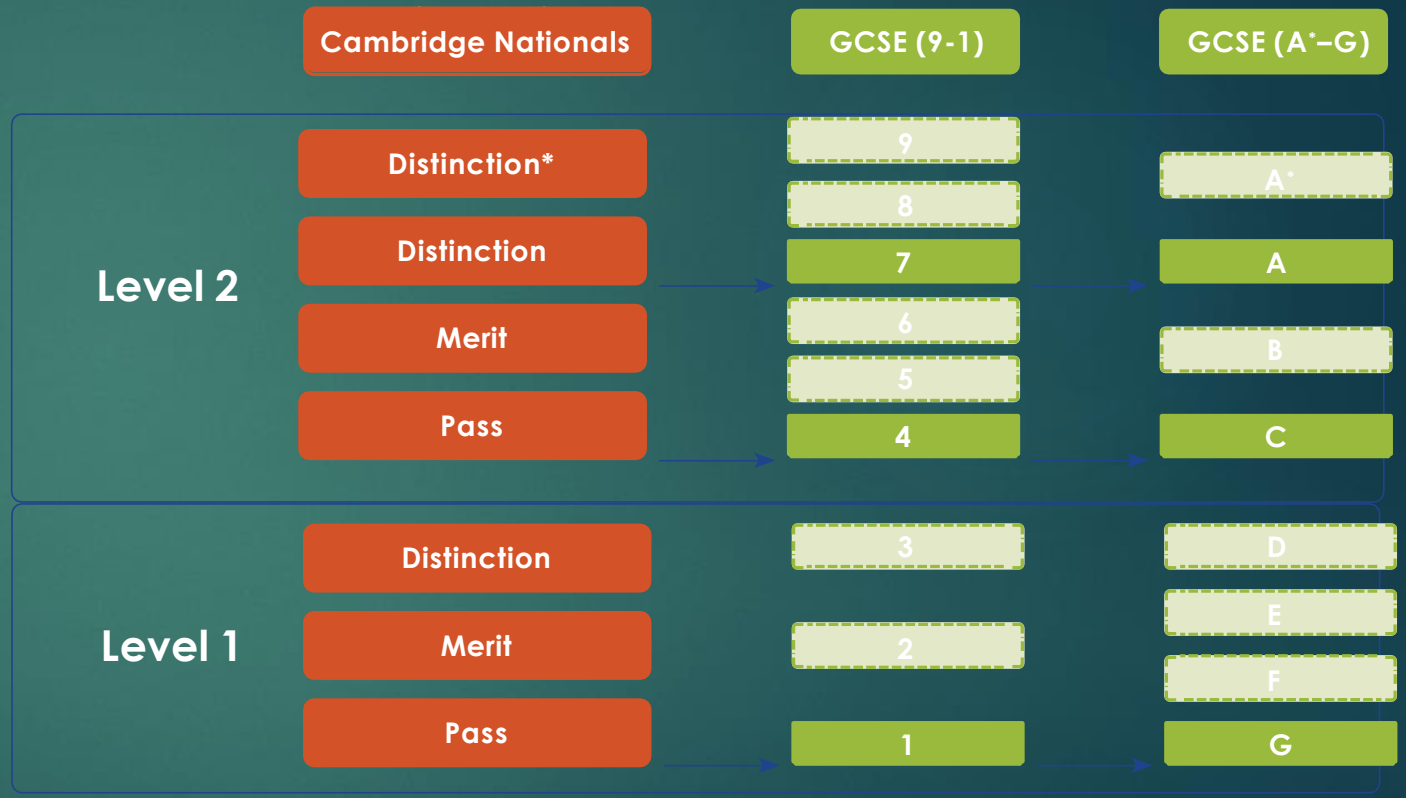
Building *brighter* futures

How do Cambridge Nationals grades compare to GCSE (9–1)?

Grades for Cambridge Nationals and for GCSEs align at key points.

Level 1 covers GCSE grades 3–1 (or D–G) and Level 2 GCSE grades 9–4 (or A*–C).

- The bottom of a Level 1 Pass is aligned to GCSE grade 1
- The bottom of a Level 2 Pass is aligned to GCSE grade 4
- The bottom of a Level 2 Distinction is aligned to GCSE grade 7



Cambridge National in

IT

IT

As part of the Cambridge National, you'll cover:

Cambridge National in IT will inspire and equip you with the confidence to use skills that are relevant to the IT sector.

It's a vocational qualification, equivalent in value to a GCSE and contains both practical and theoretical elements.

- The key principles and concepts when creating IT products
- Creating complex spreadsheet solutions to meet requirements
- How augmented reality can be used to present information
- Creating an augmented reality model prototype to be tested and reviewed

IT

Future opportunities

By developing applied knowledge and practical skills, **this course will help give you the opportunity to progress on to A Levels, a Cambridge Technical in Information Technologies, an apprenticeship or university.**

Information Technology is constantly evolving, and new jobs are developing all the time – **you could work for tech giants or create your own products**. So much is possible.

Components of the Course

Unit	Unit title	Guided learning hours (GLH)	How are they assessed?	Mandatory or optional?
R050	IT in the digital world	48	OCR set and marked	Mandatory
R060	Data manipulation using spreadsheets	36	Centre-assessed tasks, OCR moderated	Mandatory
R070	**Using Augmented Reality to present information**	**36**	**Centre-assessed tasks, OCR moderated**	**Mandatory**

Individual unit details below:

Unit R050: IT in the digital world	
48 GLH 1 hour 30 minute written examination 70 marks (80 UMS) OCR-set and marked Calculators are not required in this exam **40%**	This question paper has two sections: • Section A – worth 15 marks. Includes closed response, multiple choice and short response questions. • Section B – worth 55 marks. Includes scenario based short, medium and extended response questions. One question will be a create style question [8 marks]. One extended response question [9 marks] will be assessed using a levels of response mark scheme.
Unit R060: Data manipulation using spreadsheets	
36 GLH OCR-set assignment 60 marks (60 UMS) Centre-assessed and OCR moderated **30%**	This set assignment contains three to five practical tasks.
Unit R070: Using Augmented Reality to present information	
36 GLH OCR-set assignment 60 marks (60 UMS) Centre-assessed and OCR moderated **30%**	This set assignment contains three to five practical tasks.

DRAFT

How it is Assessed

5.4 Grading and awarding grades

All results are awarded on the following scale:

- Distinction* at Level 2 (*2)
- Distinction at Level 2 (D2)
- Merit at Level 2 (M2)
- Pass at Level 2 (P2)
- Distinction at Level 1 (D1)
- Merit at Level 1 (M1)
- Pass at Level 1 (P1).

R050: IT in the digital world

R050: IT In the dIgItal world
This is assessed by taking an exam.

In this unit you will learn about design and testing concepts for creating an IT solution or product, and the uses of IT in the digital world. Topics include:

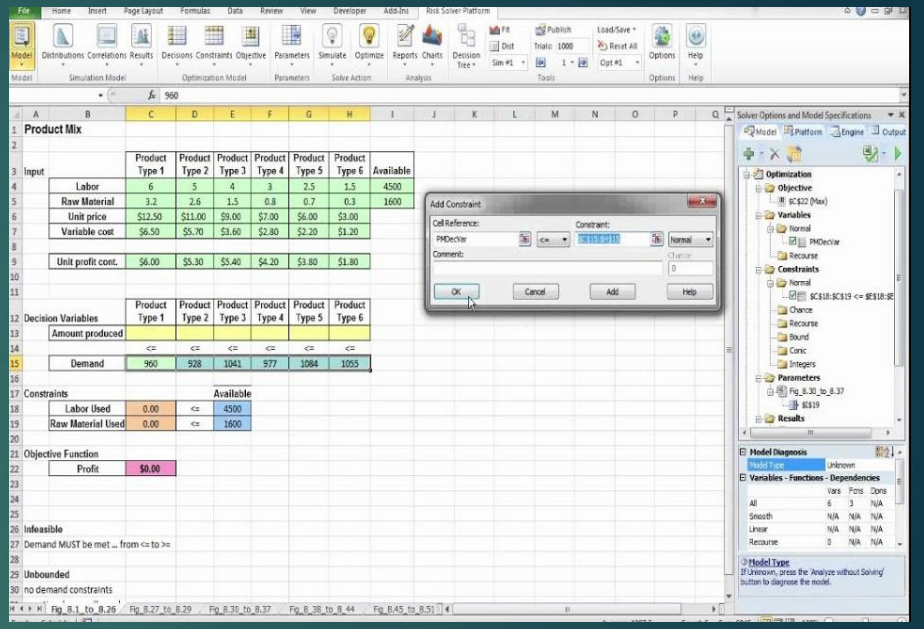
- Design Tools
- Human Computer Interface (HCI) in everyday life
- Data and testing
- Cyber-security and legislation
- Digital Communications
- Internet of Everything (IoE).

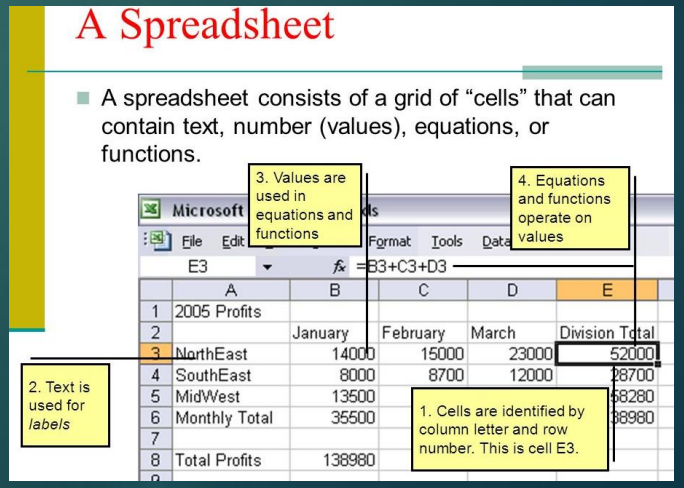
R060: Data manipulation using spreadsheets

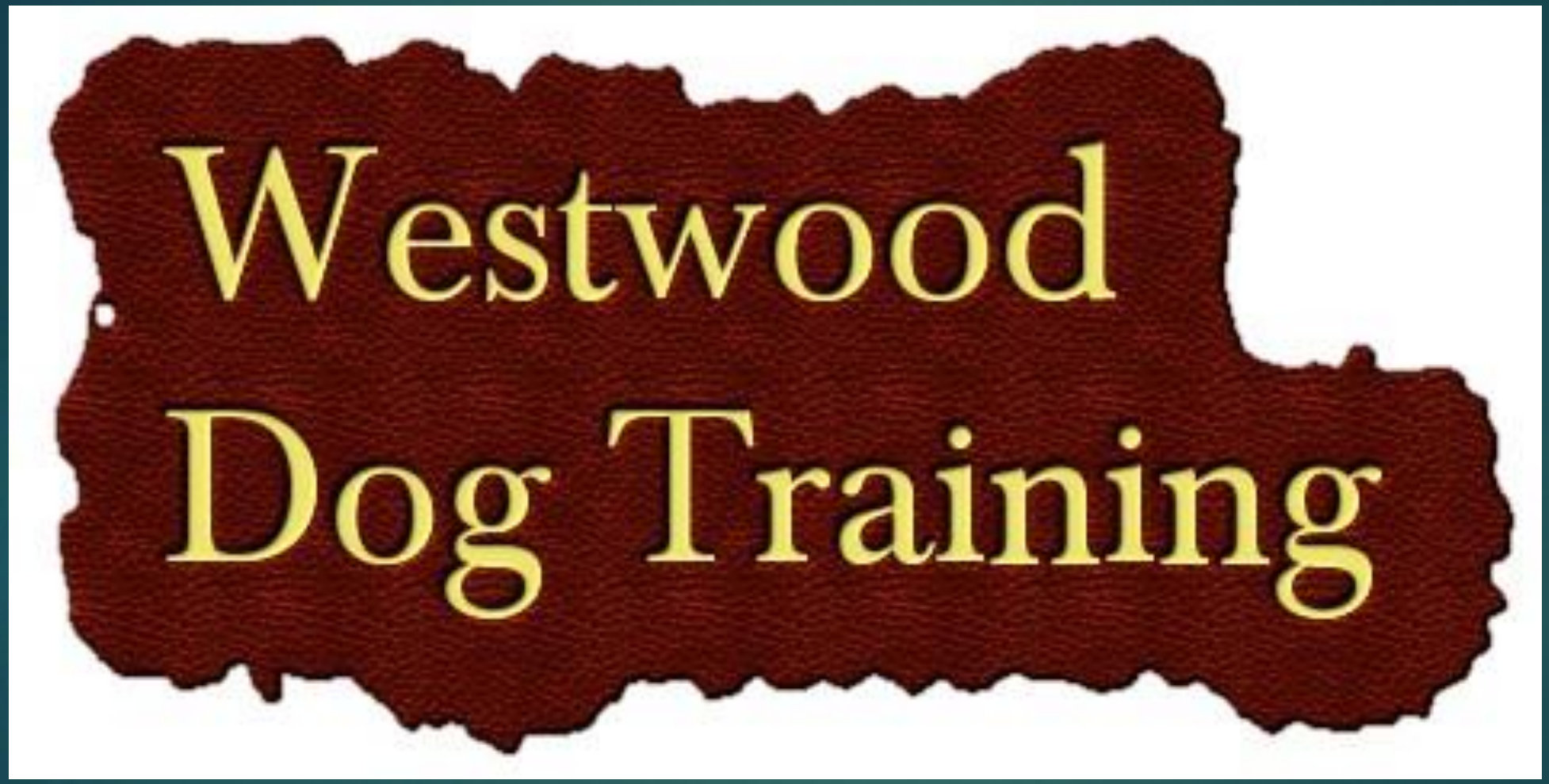
This is assessed by completing a set assignment.

In this unit you will learn how to plan, design, create, test and evaluate a data manipulation spreadsheet solution to meet client's requirements. You will be able to evaluate your solution based on the user requirements. Topics include:

- Planning and designing the spreadsheet solution
- Creating the spreadsheet solution
- Testing the spreadsheet solution
- Evaluating the spreadsheet solution.






Westwood
Dog Training

Westwood Dog Training

Westwood Dog Training is an organisation that runs dog training classes on a Monday. It offers classes at different levels to suit each dog. Westwood Dog Training is owned by Zac, who wants to introduce a new computer system, using spreadsheet software, to help manage the business.

Zac wants the new computer system to:

- Store details about the owners and the dogs that attended each class
- Work out the income generated from each dog that attended classes
- Work out the income from each category of dog training class
- Produce visual representations of the data manipulated using the spreadsheet software.

The system **must** be able to allow Zac and his staff to:

- Navigate the system via an easy to use Human Computer Interface (HCI)
- Minimise errors in the data
- Record class attendance
- Calculate and output the income from each dog that attended classes
- Calculate and output the income for each dog training class
- Produce charts of the data held, such as the number of dogs that attended each class
- Produce lists, such as those dogs that have attended specific classes.

R070: Using Augmented Reality to present information

This is assessed by completing a set assignment.

In this unit you will learn how to design, create, test and review an Augmented Reality model prototype to meet a client's requirements. Topics include:

- Augmented Reality (AR)
- Designing an Augmented Reality (AR) model prototype
- Creating an Augmented Reality (AR) model prototype
- Testing and reviewing.

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.

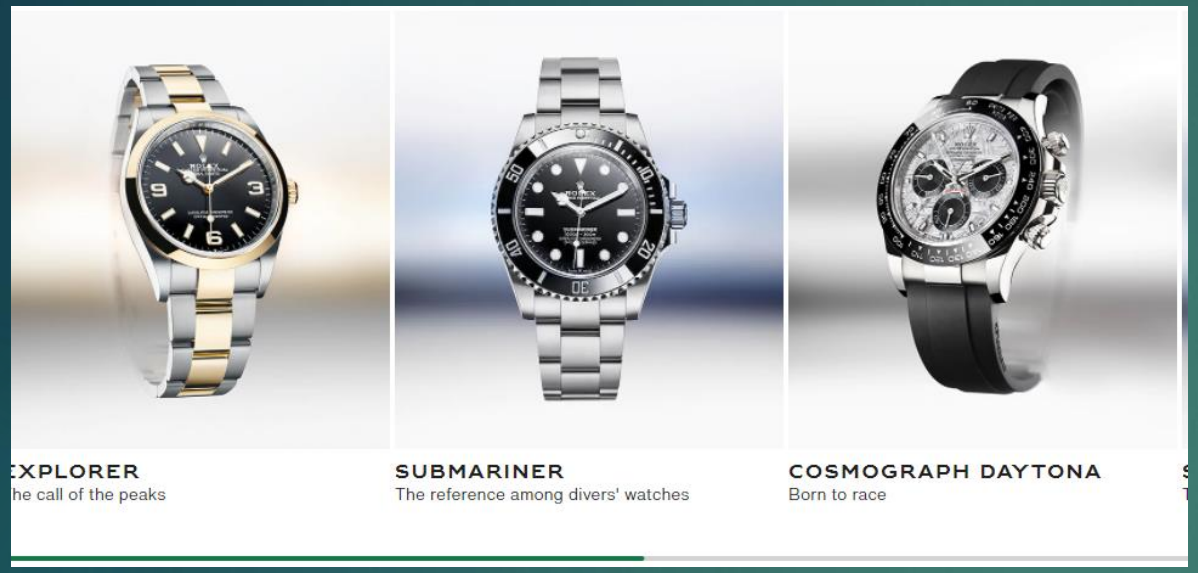
There are two types of African elephants:

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

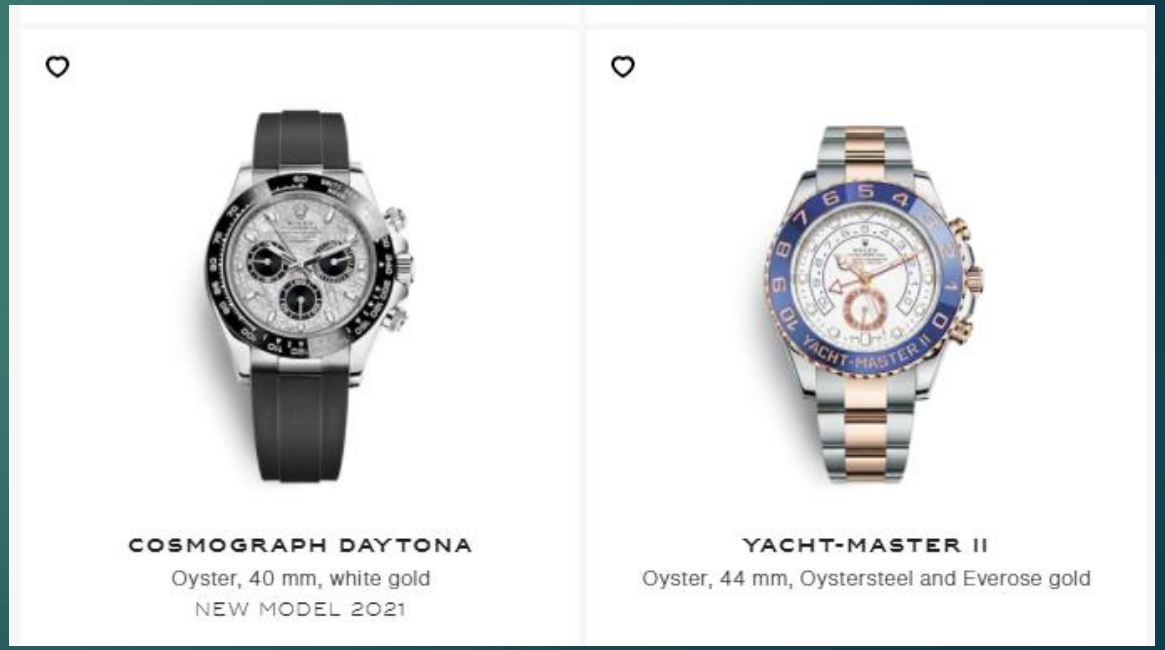
PAEW wants the resource to allow the schoolchildren to:

- 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.

AR in Action



https://ar-watches.com/

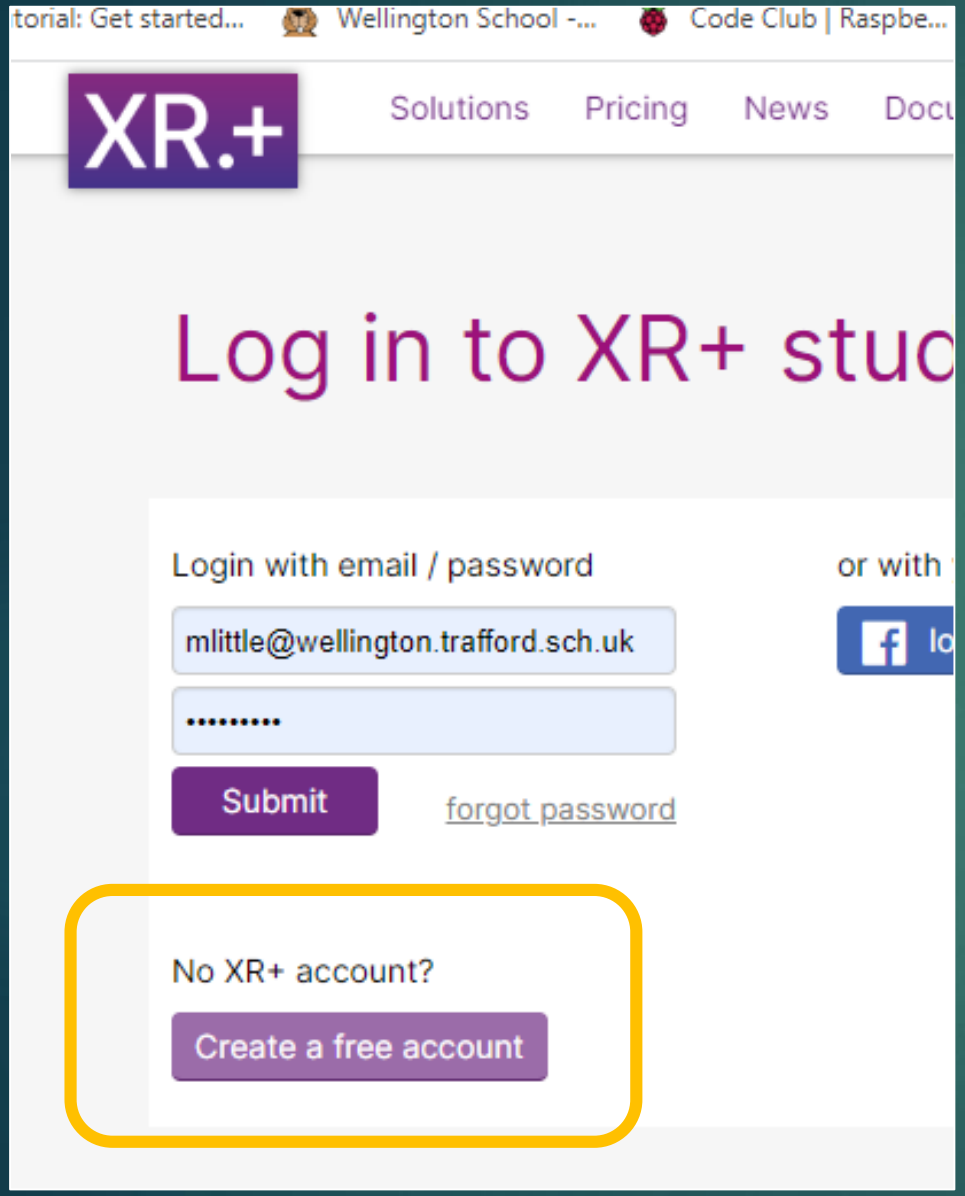


Text
(obviously!)

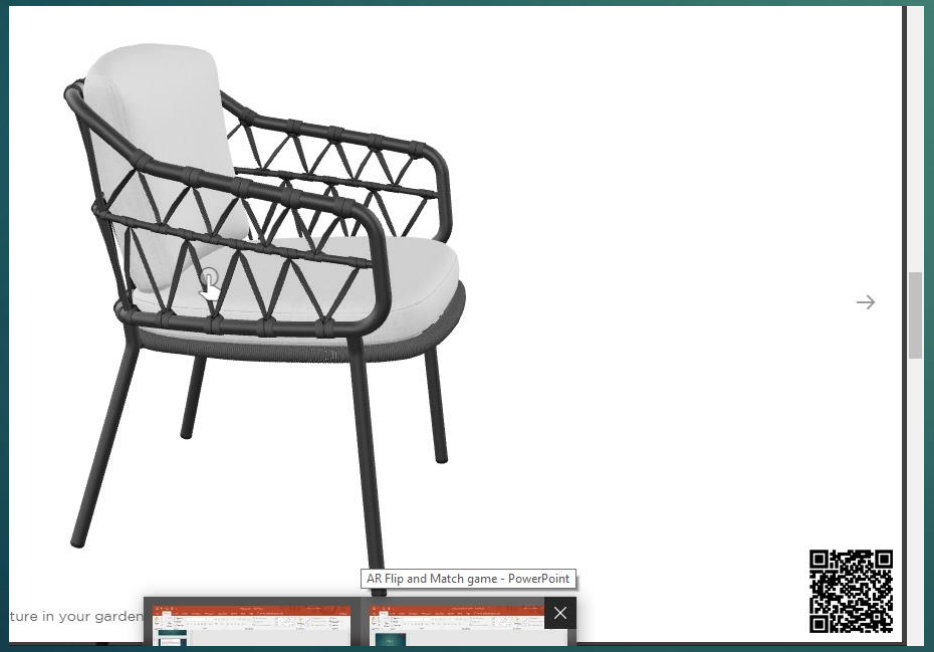
Primitive
shapes

3D models

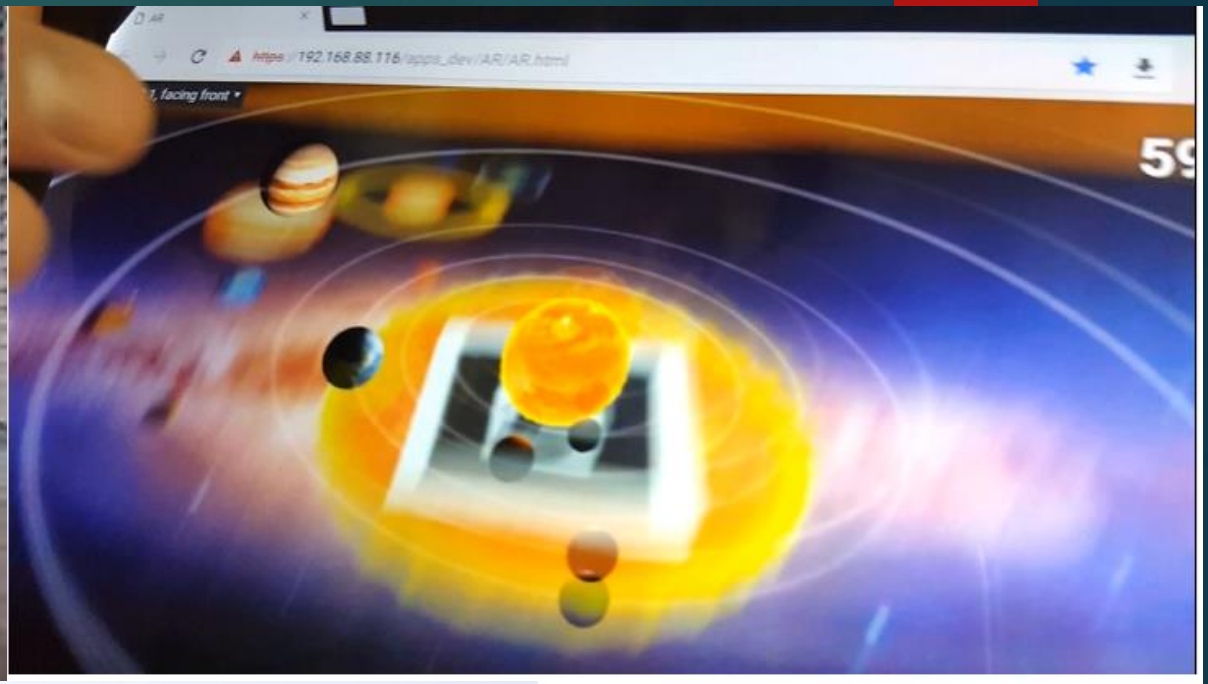
We are using XR+ or Adobe Aero



IKEA
IKEA Place


AR Flip and Match game - PowerPoint

Dining chair



Augmented Reality Tutorial - Create a Mini AR Solar System