Cadw

History Explorers

Tretower Court & Castle

Quest: Rebuilding Tretower Castle



Cadw MINECRAFT EDUCATION Hwb®

Llywodraeth Cymru
Welsh Government

Learning Activity Support Guide: Rebuilding Tretower Castle – A Sustainable Future

Learning Objectives:

- Understand the historical significance of Tretower Castle and its role in Welsh heritage.
- Explore medieval architecture and its evolution.
- Develop collaboration and digital building skills in Minecraft.
- Develop an understanding of Cadw conservation principles.
- Apply UNESCO's sustainability principles to heritage preservation.
- Apply principles of **conservation** and **sustainability** in a digital design environment.
- Promote eco-conscious thinking in historical reconstruction.
- Apply mathematical reasoning in scale conversion, budgeting, and resource planning.
- Understand proportions and measurements in architectural design.
- Use data to make sustainable construction decisions.
- Develop communication and teamwork skills through collaborative building and presentation tasks

Areas of Learning and Experience:

Humanities

- Enquiry, exploration and investigation inspire curiosity about the world, its past, present and future.
- Events and human experiences are complex, and are perceived, interpreted and represented in different ways
- Human societies are complex and diverse, and shaped by human actions and beliefs.
- Our natural world is diverse and dynamic, influenced by processes and human actions.
- Informed, self-aware citizens engage with the challenges and opportunities that face humanity, and are able to take considered and ethical action.

Mathematics and Numeracy

- The number system is used to represent and compare relationships between numbers and quantities.
- Geometry focuses on relationships involving shape, space and position, and measurement focuses on quantifying phenomena in the physical world.

Cross-curricular skills:

Numeracy Framework

- Developing mathematical proficiency: Conceptual understanding, Logical reasoning

- Understanding the number system helps us to represent and compare relationships between numbers and quantities: Calculation, Financial literacy
- Learning about geometry helps us understand shape, space and position, and learning about measurement helps us quantify in the real world: Measurement, Shape and space, Position.
- Learning that statistics represent data and that probability models chance helps us make informed inferences and decision: Collecting data, Representing data, Interpreting data

Literacy Framework

- Writing: Planning and organising for different purposes, audiences and context.
- Speaking: Clarity and vocabulary, Collaborative talk

DCF

- Producing: Sourcing, searching and planning digital content, Creating digital content, Evaluating and improving digital content

Integral Skills:

Creativity and innovation

Critical thinking and problem solving

Planning and organising

Personal effectiveness

Guiding Ideas / Possible questions to ask:

The following guiding ideas and questions could be used at various stages to stimulate thought and discussion with learners -

Planning and Layout - Start smart! Before you place a single block, think: Where did the towers go? Where were the gates? Use old maps or clues to plan the castle as it was! Let's mark it out.

Materials & Sustainability - Old builders used local stone, timber, and clever tricks to make things last. Try to build using natural or recycled materials, no plastic palaces allowed! What should you use? Why does it matter?

History & Culture - Every castle wall tells a story. This one saw knights, battles, and banquets! Add signs or a museum room to help others learn what happened here. You could add info signs! Tell me a castle tale!"

Budgeting & Maths - Even builders need to count! Imagine you have 100 coins. What will you spend on stone, wood, tools, and signs? Keep it real and fair! Do you have ideas for budgeting? How much stone can you buy?

Community & Tourism - Tretower wasn't just a castle, it was part of a village! Think: How can your build help the locals? Add gardens, paths, even a picnic spot! What else can you build?

Learning Activity Overview:

After learners have completed the Virtual Tour of **Tretower Court and Castle** via Cadw Cymru they should have developed a good understanding of the remarkable transformation of the site over the centuries, from its beginnings as a defensive Norman wooden tower and later stone tower to its later development into an elegant medieval manor house reflecting the lifestyle of a wealthy family.

They will have seen how **Tretower Court** was brought back to life with the conservation work that has taken place over the years. Whilst **Tretower Castle** is a Cadw site that visitors can enjoy, it has *not* been brought back to life in the same way that **Tretower Court** has!

Now, for the first time, learners will have the opportunity to participate in this engaging cross-curricular activity. They will explore the history and heritage of **Tretower Castle**, then use Minecraft Education to plan and rebuild it as it may have looked in its medieval prime. Guided by **Cadw's Conservation Principles** and **UNESCO's Sustainability Guidelines**, learners will consider how to preserve the past while planning for a sustainable future.

As Taliesin informs them at the end of the Virtual Tour, learners are invited to take on ***'a most Epic Quest'*** to rebuild **Tretower Castle**, not as a theme park, but as a tribute to its mighty, muddy past!

Learning Activity Introduction:

Welcome, young architects, historians, and eco-warriors!

Tretower Castle once stood proudly in the Welsh hills, full of stories, secrets, and stone towers. Today, much of it lies in ruins… but you have the power to bring it back to life!

In this Minecraft Education activity, you'll become heritage heroes, rebuilding the castle just as it might have looked hundreds of years ago. But there's a twist: you must follow real-life rules from **Cadw** and **UNESCO** to make sure your build is historically accurate, sustainable and respectful to the past.

You'll plan carefully, use maths to budget your materials, and think about how your design helps the people who live nearby today.

Are you ready to step into the past—and build for the future?

Let the quest begin!

Stage One: Introduction & Research

The goal of this stage is to understand the history and current state of **Tretower Castle**.

Activities:

- Initially, use the 'Virtual Tour' on the Cadw Cymru **Tretower** site to develop an understanding of Tretower's history.
- Discuss what remains today and what it might have looked like at its peak.
- Introduce UNESCO's sustainability goals, particularly in cultural heritage and tourism. (These are reinforced in the Tretower Minecraft world via the Quest NPCs)

Taliesin NPC introduces the quest of rebuilding **Tretower Castle** via dialogue and videos:

Link to video 'Quest Introduction', which is embedded in the Cadw Cymru Minecraft World

Encourage learners to make their way back up towards the castle from the court, where they will encounter a range of Quest NPCs. The Quest NPCs will provide guidance via dialogue and videos:

Link to video 'Cadw Conservation', which is embedded in the Cadw Cymru Minecraft World

Link to video 'UNESCO Sustainability', which is embedded in the Cadw Cymru Minecraft World

As learners near the castle, an additional six Quest NPCs will appear and provide further dialogue in the context of stakeholders in the project:

- Heritage Historian
- Community Leader
- Eco Architect
- Tour Guide
- Site Ranger
- Planner/ Advisor

A further Quest NPC will reference the guidelines that should be adhered to once learners start planning and building.

Link to video 'Guidelines', which is embedded in the Cadw Cymru Minecraft World

Quest NPC will also provide examples of some Real-World Examples of Sustainable Heritage Management via reports:

Fountains Abbey and Studley Royal

Si Thep Historical Park, Thailand

Stage One Math Focus: Scale and Estimation

- Provide real-world dimensions of **Tretower Castle** (e.g., tower height, wall lengths).
- Task: Convert real dimensions to Minecraft blocks using a set scale (e.g., 1 block = 1 metre or 1 block = 0.5 metres).
- Challenge learners to calculate:
    - Perimeter and area of castle walls.
    - Volume of the keep, bailey etc.
    - Estimate the total number of blocks needed for walls, floors, roofs, etc.

Stage Two: Planning the Build

The goal of this stage is to create a sustainable reconstruction plan.

Activities:

- Split the class into teams: architects, historians, landscape designers, and sustainability advisors.
- Sketch blueprints or outlines of the castle based on historical references.
- Each team presents how they will incorporate sustainability (e.g., green spaces, eco-friendly materials, public access without damaging the structure).

Stage Two Math Focus: Budgeting and Resource Allocation

- Assign a fictional budget (e.g., 10,000 Minecraft coins).
- Assign fictional costs to building materials (e.g., stone = 10 coins/block, wood = 5 coins/block, glass = 20 coins/block).
- Teams must:
    - Calculate costs based on their material plan.
    - Make cost-saving decisions while keeping sustainability in mind.
    - Balance the budget with eco-friendly goals (e.g., using recycled materials or renewable sources).

Optional Extension:

- Use spreadsheets to track costs and materials.
- Add "labour" costs for realism (e.g., cost per hour to build or transport materials).

Stage Three: Building in Minecraft

The goal of this stage is to rebuild **Tretower Castle** with historical accuracy and sustainable design within the Cadw Cymru **Tretower** Minecraft World.

Activities:

- Use creative mode to construct the castle and the surrounding area. The Cadw Cymru **Tretower** Minecraft World will automatically switch to creative mode once learners start interacting with the **Taliesin NPC** and the **Quest NPCs**. This will allow learners to use the castle remains built in the world as the basis for their restoration of **Tretower Castle**.
- To reflect sustainability, implement solar panels (symbolic), water recycling (e.g., rain collection), and educational signage (Minecraft signs/books).
- Landscape using native plants and avoid deforestation or excessive mining in-game.

Stage Three Math Focus: Application of Scale and Spatial Reasoning

- As learners build, they must stick to their scaled plans.
- Recalculate dimensions in Minecraft as needed to maintain proportions.
- Encourage spatial reasoning: How do you centre a circular tower in a square courtyard? How wide should a door be compared to a wall?

Stage Four: Presentation & Data Reflection

The goal of this stage is for the learners to share learning outcomes and reflect on sustainability.

Activities:

- Tour each group's castle in Minecraft.
- Each team presents their sustainability features and historical accuracy.
- Reflective writing prompt: "How can we preserve history while protecting our future?"

Stage Four Math Focus: Data Analysis & Comparison

- Learners present:
  - Original vs. final dimensions.
  - Total cost vs. budget.
  - Sustainability index: Calculate the percentage of eco-materials used vs. the total.
- Create graphs or charts (paper or digital) to visualise:
  - Materials used by category.
  - Budget allocation by feature (walls, roof, landscape).
  - CO2 savings from using renewable materials (fictional numbers for learning).

Bonus Maths Challenge (Optional)

- **Ratio & Proportion:** Recreate only part of the castle and then extrapolate the full size.
- **Geometry:** Explore 3D shapes used in towers, arches, and turrets.
- **Time Estimation**: Predict and track time needed to complete phases, convert into project timelines

Plenary / Reflection:

Well done, heritage heroes! You've journeyed through time, planned like pros, and built something truly special.

- Now let's take a moment to reflect and think about...
    - What part of your build are you most proud of?
    - How did you make your castle sustainable and respectful of the past?
    - What challenges did you face and how did you solve them?
    - How did you work as a team (if applicable)?
    - If real visitors came to your castle, what would they learn?

Share Your Thoughts:

- "If I rebuilt Tretower again, I would..."
- "One thing I learned about history/building/sustainability is..."
- "I think Cadw and UNESCO would say my castle is..."

Key Vocabulary:

Heritage

Medieval Architecture

Sustainable

Preservation

Cadw Conservation Principles

UNESCO Sustainability Principles

Community

Tourism

Dimension

Proportion

Measurement

Materials

Budget

Resources / Supporting Files:

- Tretower Court and Castle Practitioner Support Guide
- Devices with Minecraft Education installed
- Minecraft Cadw World
- Planning tools: squared paper, pencils, etc.
- Images of Tretower Castle