

# Building a medieval fortress(v1):

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PR3 - EDUCATIONAL LEARNING PATHS

Technology tools (version):	Pico 4 Enterprise
Requirements: What do you need? (Think hardware, skills, knowledge.)	<ul style="list-style-type: none"> <li>○ Knowledge of "<a href="#">Castle Builder</a>" or similar games to assist students as needed.</li> <li>○ A stable and strong internet connection</li> <li>○ Computers with internet access</li> </ul>
Optional technologies:	<ul style="list-style-type: none"> <li>○ Projector or Interactive Whiteboard: For displaying instructions, introductory information, and facilitating group discussions.</li> </ul>
Date:	15.01.2024
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Topics of the lesson(s):	Principles of medieval castle building # Virtual Reality
Estimated time:	<90x90 minutes>

Lesson title/subject: <Building a medieval fortress>

**Intention:** What do you wish for or hope to happen? (Intentions are often not measurable or tangible, but help you in developing the design process.)

1. To introduce students to the construction principles and historical context of medieval castles using both VR technology (Pico 4) and the computer-based game "[Castle Builder](#)".

**Desired Outcomes:** One or more measurable and tangible goals the teacher aims for with this lesson/these lessons.

1. Students understand the basic elements and historical context of castle construction.



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2. Students develop spatial thinking and planning skills using different technologies.
3. Students learn collaboration and problem-solving in diverse learning environments.

**Agenda:** HOW are you going to reach the goals? Description of the lesson plan / educational activities / working methods.

1. Introduction (90 min): The first 90 minutes will be devoted to an introduction to the topic (overview of medieval castles and their historical significance) and the technology (introduce students to both Pico 4 VR headsets and the "Castle Builder" game on computers).
2. Group Work (60 min): Half the students use Pico 4 headsets and the other half work on computers. Both groups build and explore castles. Half the time there is an exchange (groups switch activities to experience both technologies).
3. Discussion and Analysis (25 min): Discuss experiences and lessons learned from using different technologies. Filling in worksheets.
4. Summary (5 min): Sum up the lesson and gather feedback.

**Roles:** Who facilitates what? Who participates? What do we expect of the students?

1. Teacher: Guides and supports the use of both technologies, facilitates group work.
2. Students: Split into two groups; one group works with Pico 4 VR headsets, and the other on computers.

Expectations from Students

1. Flexibility and openness to learning new technologies.
2. Ability to collaborate and communicate during group work.
3. Focus and participation in both activities.

**Rules:** Rules or principles are about how you want to learn and work together.

1. Every student must follow safety instructions and guidelines when using VR headsets and computers.
2. Respect and cooperation towards fellow students and the teacher.
3. Adherence to time and task management principles.

**Time:** Describe the time path: What time do we start / finish / break? When is the time for reflection? What happens between contact times?

1. Start/End: Two 90-minute sessions.
2. Breaks: As needed, especially before and after switching groups.
3. Reflection Time: Last 5 minutes for lesson summary and feedback.



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### Extra: Building a Medieval Castle: VR Video Follow-up Worksheet

#### **1. Castle Design Principles**

- 1.1 Describe the main design elements of your castle used in both the VR game and the computer.
- 1.2 How do the VR technology and computer-based design experiences differ?

#### **2. Historical Context**

- 2.1 What role did castles play in medieval society and warfare?
- 2.2 How did both technologies help you understand the complexity of castle construction?

#### **3. Technological Experience**

- 3.1 What were the main challenges and lessons learned in using VR technology and the computer game?
- 3.2 How did these technologies influence your understanding of castle architecture?

#### **4. Reflection and Opinion**

- 4.1 What new knowledge did you gain about castles during this lesson?
- 4.2 How might this knowledge help understand broader medieval history and culture?