



## WORKSHOP: DEVELOPING TEACHING MANUALS

(Prepared and led by Dr. Larissa Eikermann / Viviane Bierhenke)

### WORKING GROUP

## World Heritage Site “Erzgebirge/Krušnohoří Mining Region” (Dr. Larissa Eikermann / Friederike Hansell)

*The requirement for working in the working groups is the Teaching Manual: UNESCO and its mission to protect people’s heritage and identity*

- **TEACHING UNIT Technology: Questions and Modules of teaching about Transboundary European World Heritage Sites: Recommendations for teaching in lessons, projects or excursions.**

<b>ERZGEBIRGE / KRŮSNOHŮŘÍ</b>	The unique cultural landscape of the Erzgebirge/Krušnohoří region is inseparable linked to mining. Since the first discovery of silver ores in 1168, mining and metallurgy have shaped the technical, economic, social and ecological achievements of the region. Today, the surface mine buildings, the adits and shafts underground, man-made water ditches and ponds, historic old towns, heaps landscapes and mining traditions bear witness to this once splendid era.
<b>Basic questions about the project:</b>  <i>Use the digital platform (videos, information desk etc.) to introduce these questions.</i>  <b>School-based questions about the project:</b>	<ul style="list-style-type: none"> <li>• What is Transboundary European World Heritage?</li> <li>• What defines a Transboundary European World Heritage Site?</li> <li>• What are the goals of teaching about Transboundary European World Heritage Sites?</li> </ul> <p><i>The teachers themselves have to formulate the questions in their lessons. Please think of this points:</i></p> <ul style="list-style-type: none"> <li>• Which terms have to be explained (Transboundary, World Heritage, Europe, Global Identity)?</li> <li>• Which interests have the students in these questions?</li> <li>• Why should these questions be important for them?</li> <li>• How can you answer and explain these questions in an easy and student friendly language?</li> <li>• Why is this Site (Erzgebirge) a World Heritage Site? What were the criteria for the inscription?</li> </ul>

<b>Modules:</b>	<b>Technology</b> The topic <i>Technology</i> shows the machines, equipment or instruments and their use in the mining sector.
<b>Module overview</b>	See information desk: <a href="https://worldheritage-education.eu/en/sites/erzgebirge-kruznohor%C3%AD#infothek">https://worldheritage-education.eu/en/sites/erzgebirge-kruznohor%C3%AD#infothek</a>
<b>Transfer of the module to the World Heritage Site</b> <i>Try to find school-based and curricular topics.</i>	Which topics of the World Heritage Site fit to this module? <ul style="list-style-type: none"> <li>- Water hoisting technologies (development and worldwide influence; as key criteria for the inscription; combine developments in Czechia and Saxony)</li> <li>- Georgius Agricola and the Ore Mountains (Transfer by Agricola’s “De re metallica”)</li> </ul>
<b>School-based activities</b>	Which activities fit to the named topics?  <b>Building a water wheel to understand the innovation of water hoisting in the Ore Mountains:</b>  Steps: <ul style="list-style-type: none"> <li>- Introduction of the topic by pictures about the water system and through presentation of the personality of Georgius Agricola</li> <li>- Materials for building the water wheel: Wine bottle cork, yogurt cup, 2 nails (10 cm long), 2 branch forks, drill <math>\varnothing</math> 3 mm</li> <li>- Divide the top edge of the yoghurt cup into either four or six sections of the same size by drawing small markings with a felt pen. Use scissors to cut the cup from the edge marks to the bottom, then you can cut off the bottom. You now have four or six shovels for the water wheel.</li> <li>- Then drill the cork from both sides and insert a nail into the holes. With the knife you now cut the cork on the side four or six times about 5 mm deep. The blades are inserted into these slots on a trial basis. If the cuts are deep enough and the angle also fits, the blades are glued in.</li> <li>- In order for the waterwheel to turn, you need two suitable branch forks that are inserted into the stream bed. Now put the water wheel with the nails in the two Branch forks and it starts to turn.</li> </ul> Building instructions from: <a href="https://www.geo.de/geolino/basteln/14761-rtkl-bauanleitung-wasserrad-aus-joghurtbechern">https://www.geo.de/geolino/basteln/14761-rtkl-bauanleitung-wasserrad-aus-joghurtbechern</a> .  General methods: <ul style="list-style-type: none"> <li>- group discussion controlled by the students (like in the PIMUN method)</li> <li>- internet research</li> <li>- oral history (videos with the contemporary witnesses)</li> <li>- trips to the technical monuments in the Ore Mountains</li> </ul>
<b>Goals of the UNESCO</b>	Which goals of the UNESCO ASPnet schools could primarily be

<b>ASPnet schools</b>	<p>achieved through this module?</p> <ul style="list-style-type: none"> <li>- World Heritage Education</li> <li>- Education for sustainable development</li> <li>- Raising of awareness</li> </ul>
<b>School subjects</b>	<p>In which subjects can this module be used?</p> <ul style="list-style-type: none"> <li>• German, Foreign Languages, Geography, History, Social Studies, Politics, Economics, Philosophy, Ethics, Religion, Biology, Math, Physics, Art, Music, Home Economics, Computer Science...</li> <li>• Interdisciplinary</li> </ul>
<b>Target group /Ages</b>	<ul style="list-style-type: none"> <li>• 15+</li> <li>• Students from both states who share the Transboundary World Heritage Site</li> <li>• All school forms</li> </ul>
<b>Anticipation of competences   skills</b>	<p>Which competences and skills can be achieved with the access in this module?</p> <ul style="list-style-type: none"> <li>- research and presentation skills</li> <li>- planning a project</li> <li>- discuss the importance of a Heritage Site</li> <li>- self-management and timing of the learning process</li> <li>- media competence</li> <li>- creativity</li> </ul>
<b>Learning forms and sites</b>	<p>For which learning forms and sites should this module be used?</p> <ul style="list-style-type: none"> <li>- project weeks</li> <li>- group discussions / team work</li> <li>- excursions to the sites in the Ore Mountains</li> <li>- suitable locations</li> </ul>
<b>Timeframe</b>	<i>Preparing and accompanying lessons to project weeks</i>
<b>Additional information</b>	

## 2. TEACHING UNIT: Presentation of the results/discussion of the next steps

<b>What has been achieved?</b>	A first step to implement Transboundary European World Heritage in school.
<b>What else could be added to the worksheets?</b>	
<b>Where these materials shall be published?</b>	On the digital platform and maybe as a print version.
<b>How can the platform be used efficiently?</b>	

<p><b>Further remarks about developing of the teaching materials.</b></p>	<p>Difficult but productive working process in the group because of the complex aspects of the topic (mining today, globalisation and its effects on the history and culture of the region, ...).</p>
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*Please be prepared to present the results of your workshop group and make sure that the moderator of your workshop receives a copy of your work in order to summarize the results.*