

Integrating Neandertal Legacy:  
From Past to Present CA 19141

# EDUCATION KIT AND GUIDELINES FOR BEST PRACTICES

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INTEGRATING NEANDERTAL LEGACY :  
FROM PAST TO PRESENT

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# EDUCATION KIT AND GUIDELINES FOR BEST PRACTICES

# Introduction

This publication brings the results of activities aimed at achieving several important goals on which iNEAL's Working Group 4 worked intensively throughout the four years of the Action. The topics covered in this book, which provides guidelines for good practices in three related areas, as well as a proposal for an educational kit for teaching in primary and secondary schools, were the subject of four training schools that Working Group 4 organized and conducted during the Action.

**Educational kit for elementary and secondary schools** is partly a direct result of the Training School *Neandertals in Education*, held on 26-28 April 2022 at the Neanderthal Museum, Mettmann, Germany.

**Guidelines for best practices in Neandertal heritage presentation** are based on the Training school *Presenting Neandertals*, organized by the Autonomous University of Lisbon, Department of History, Arts and Humanities, Lisbon, Portugal from 3-5 October 2023.

**Management of Neandertal heritage** was a topic we returned to again and again throughout the Action, and we especially dealt with it at the *Training School on valorization of Neandertal heritage through the creation of cultural routes*, held at the Archaeological Museum in Zagreb, Croatia between 27-29 September 2021.

The training school *Neandertals in Tourism*, organized between 7-9 May, 2024 in Istanbul, Turkey as a collaboration between Istanbul University, Düzce University and Bilecik Şeyh Edebali University, served as a starting point for developing **Guidelines for best practice in valorisation of Neandertal heritage in tourism**.

It is our wish that the tools we present here serve all those who come into direct contact with the Neandertal heritage, regardless of whether they are archaeologists, anthropologists, scientists of other profiles, heritage managers, site managers, museum curators, or other stakeholders.







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# **Part I**

## **EDUCATIONAL KIT: TEACHING ABOUT NEANDERTALS IN SCHOOLS**



## Introduction: teaching science in schools

Teaching science in schools is essential for fostering critical thinking, problem-solving skills, and a deep understanding of the world. Science education equips students with the tools they need to explore, analyze, and interpret the physical and natural world, helping them to make informed decisions and contribute to society in meaningful ways. As we face global challenges like climate change, health crises, and technological innovation, science education plays an increasingly important role in shaping future generations to tackle these issues responsibly and effectively. At its core, science is about inquiry – asking questions, forming hypotheses, conducting experiments, and drawing conclusions based on evidence. Teaching science in schools encourages students to develop critical thinking skills by learning how to approach problems methodically and rationally. Whether students are examining the structure of an atom or exploring ecosystems, they are consistently required to analyze data, recognize patterns, and think logically about cause and effect.

This process helps students become better problem solvers, not just in scientific contexts, but also in everyday life. The skills acquired in a science classroom – evaluating evidence, questioning assumptions, and making data-driven decisions – are transferable to many other fields, including technology, engineering, medicine, and even business. These abilities foster lifelong learning and adaptability, qualities that are increasingly valuable in a rapidly changing world.

Science education also plays a crucial role in nurturing curiosity. When students are encouraged to ask “why” and “how,” they become more engaged with the learning process. This sense of curiosity can lead to creativity and innovation, as students are inspired to develop new ideas, inventions, or ways of solving problems. For example, learning about space exploration might spark a student’s interest in astronomy or engineering, setting them on a path toward a future career in scientific research or technological innovation.

By promoting inquiry-based learning, science education helps students appreciate the relevance of science in everyday life. Hands-on experiments, real-world applications, and interactive learning environments stimulate curiosity and help students see the connections between scientific principles and the world around them. This engagement is crucial for fostering a love of learning that extends beyond the classroom.

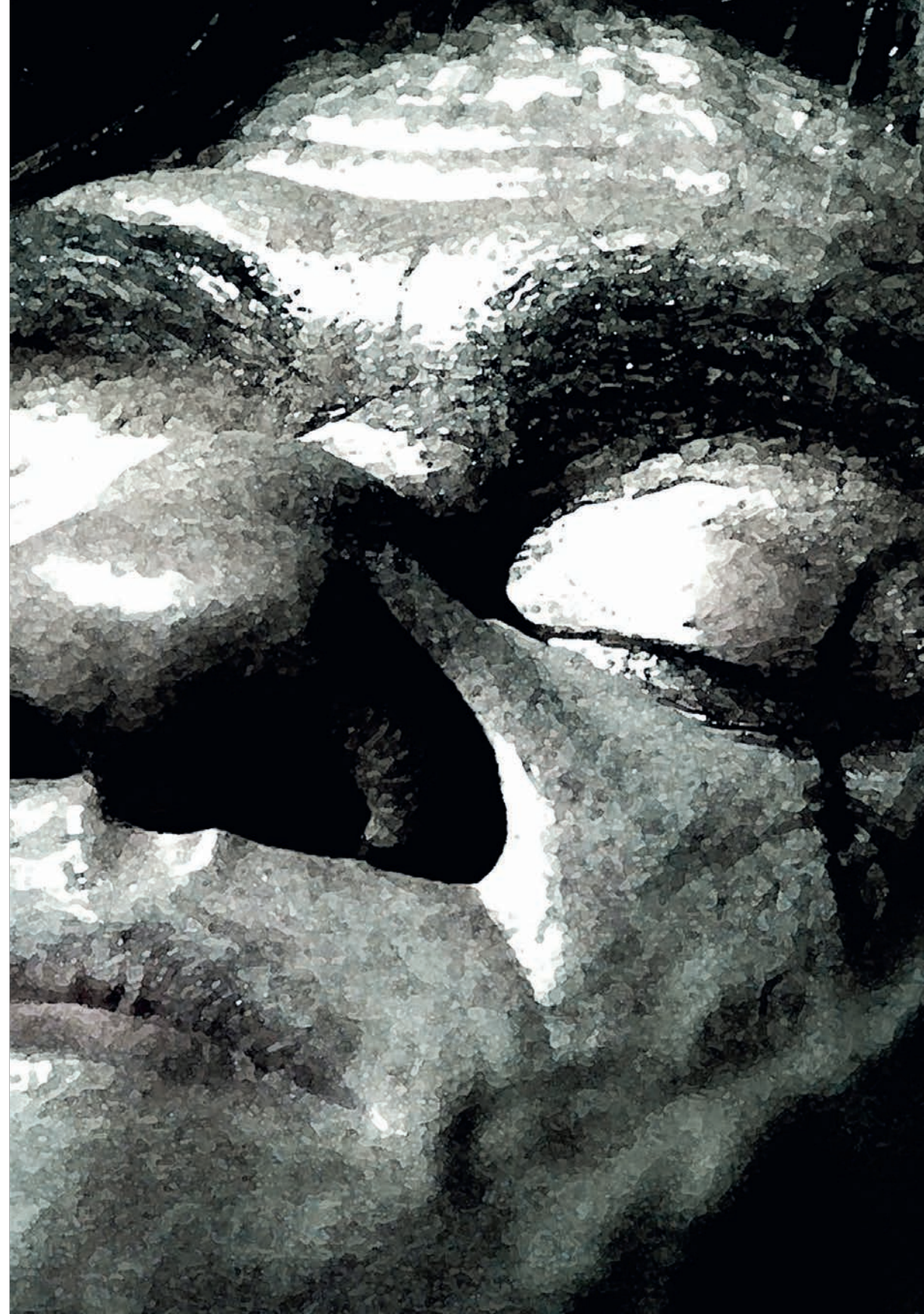




In today's world, scientific literacy is more important than ever. Issues like climate change, pandemics, and advances in biotechnology require a population that can understand scientific principles and participate in informed debates. Teaching science in schools ensures that students develop a basic understanding of these pressing issues, preparing them to make responsible decisions as citizens.

Finally, science education fosters a sense of global responsibility. Many of the challenges we face – such as environmental degradation, food security, and healthcare – are global in nature, requiring international cooperation and scientific solutions. By learning about these issues in school, students gain a deeper awareness of their role as global citizens and the importance of using scientific knowledge to contribute to a sustainable and just world.

Teaching science in schools is vital for developing a generation of critical thinkers, innovators, and responsible global citizens. Through science education, students gain not only the knowledge and skills necessary for personal success but also the tools to address the complex challenges of the modern world. By fostering curiosity, critical thinking, and problem-solving abilities, science education lays the foundation for a brighter, more sustainable future.





## Teaching about Neandertals in schools

Teaching about Neandertals in schools is essential for fostering a comprehensive understanding of human evolution and challenging outdated perceptions about our prehistoric relatives. By exploring the lives of Neandertals, students gain insight into not only their biological and cultural development but also the shared evolutionary heritage that connects all humans. This topic can enhance critical thinking, encourage scientific inquiry, and promote a more nuanced view of history. Integrating Neandertal studies into the school curriculum offers numerous educational benefits, from expanding students' understanding of anthropology and archaeology to inspiring curiosity about ancient humans. One of the most important reasons to teach about Neandertals is to provide students with a clearer understanding of human evolution. Neandertals are a crucial piece of the puzzle in understanding the evolutionary history of living humans. By studying Neandertals, students can grasp the concept of evolution as a process, learning how species adapt to their environments and how genetic traits are passed down over time.

In addition, Neandertals challenge the linear, simplistic view of evolution, often portrayed as a straightforward progression toward modern humans. Instead, teaching about Neandertals reveals that evolution involves complex interactions between multiple hominin species. By understanding that Neandertals coexisted with anatomically modern humans (*Homo sapiens sapiens*), and even interbred with them, students can appreciate the diversity of human ancestors and how we share a common heritage with these ancient populations.

Historically, Neandertals have been portrayed as primitive, unintelligent, and brutish – depictions that have fueled stereotypes and misconceptions about their capabilities and evolutionary role. However, scientific research shows that Neandertals were much more sophisticated than previously believed. They used tools, controlled fire, buried their dead, and possibly even created art. By teaching students the latest scientific discoveries, schools can help debunk these myths and foster a more accurate understanding of Neandertals as complex beings who demonstrated intelligence and adaptability. This lesson also helps students understand how scientific knowledge evolves over time. The changing perception of Neandertals illustrates how new discoveries can overturn long-held assumptions and how science is an ongoing process of inquiry and revision. Through this, students learn the value of evidence-based reasoning and the importance of remaining open to new ideas and data.



Teaching about Neandertals also offers a unique opportunity for interdisciplinary learning. The study of Neandertals intersects with multiple academic fields, including biology, anthropology, archaeology, genetics, and even art. For example, examining Neandertal skeletal remains introduces students to the principles of biology and anatomy, while archaeological sites and artifacts allow students to explore ancient technology and culture. Moreover, genetics plays a pivotal role in understanding how modern humans and Neandertals are related. Teaching about the discovery that many humans today carry Neandertal DNA can introduce students to basic concepts in genetics and human ancestry. This interdisciplinary approach not only broadens students' knowledge but also helps them appreciate the interconnectedness of different fields of study. The story of Neandertals naturally sparks curiosity and encourages students to ask important questions. How did Neandertals adapt to the harsh Ice Age environments? What caused their extinction? What can we learn from their interactions with anatomically modern humans? These questions engage students in critical thinking and allow them to explore hypotheses, evidence, and conclusions in a scientific context. By engaging with primary sources, such as fossil evidence and archaeological findings, students can develop skills in data interpretation and analysis. They also learn to critically evaluate the evidence presented in different scientific theories and form their own reasoned conclusions about Neandertal life and culture.

Finally, teaching about Neandertals can promote a sense of shared humanity. Learning about ancient hominins emphasizes that all humans, regardless of background, share a common evolutionary past. By examining the similarities between Neandertals and modern humans – such as their use of tools, social behaviors, and genetic legacy – students may develop a deeper understanding of what it means to be human and the diversity of the human experience. Teaching about Neandertals in schools offers a rich opportunity to enhance students' understanding of human evolution, challenge misconceptions, and encourage critical thinking. Through interdisciplinary learning and evidence-based inquiry, students gain a broader perspective on the past and a deeper appreciation of our shared heritage with these ancient relatives.

The Neandertal Education Kit is a comprehensive resource designed to bring the fascinating world of Neandertals to life in classrooms. This kit provides educators with a variety of tools to engage students in the study of our closest extinct relatives, making ancient history accessible, interactive, and exciting. It can serve as a dynamic tool for





teachers, students, and museums, aiming to explore the life, culture, and biology of Neandertals in an engaging and hands-on manner. A comprehensive Neandertal Education Kit would incorporate a range of activities, models, and resources that align with interdisciplinary studies in science, history, art, and culture. Here we present various ideas for creating a well-rounded Neandertal Education Kit that can engage students of various ages and result in better understanding of this important part of human evolutionary history, the importance of scientific approach, and promote debate on various subjects. By integrating elements from different sciences, such as anthropology, archaeology, genetics, geology, art, and so on, the kit can cater to diverse learning styles. Each of these ideas adds a unique layer of engagement, ensuring that students learn about Neandertals in a meaningful, memorable, and educational way.



Workshops and training schools for international network of scientists from different backgrounds helps in creation of teaching kits and guidelines



### 1. Neandertal timeline

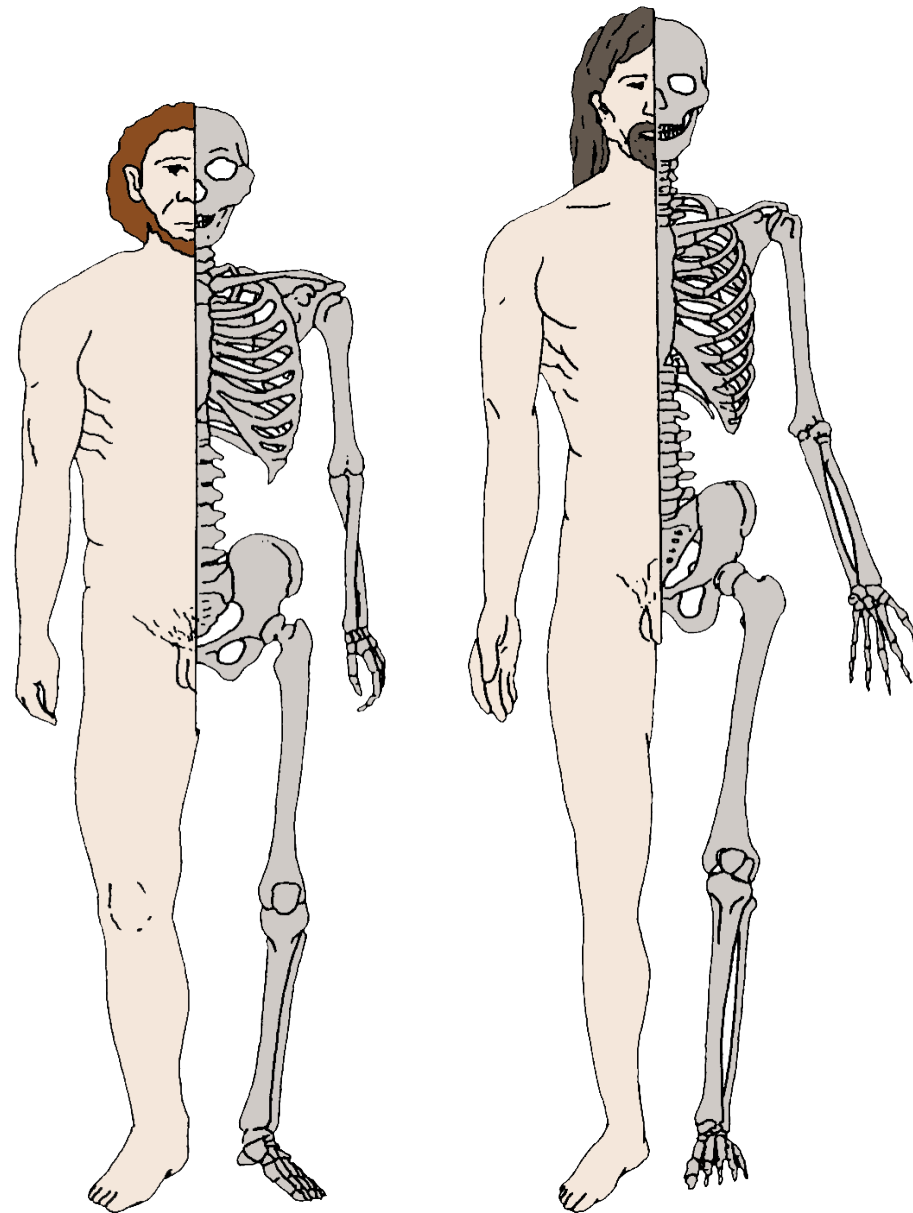
Include a timeline poster that shows the evolutionary journey of Neandertals, marking important events like their first appearance, cultural developments, interactions with anatomically modern humans, and eventual extinction. The timeline can also depict key climate changes and Ice Age events.

### 2. Anatomical model of a Neandertal skull

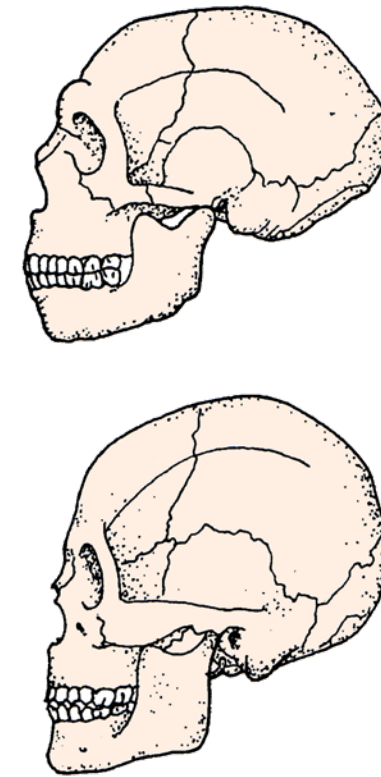
A 3D replica of a Neandertal skull can allow students to observe the key differences and similarities between Neandertals and modern humans, promoting discussions on evolution and adaptation.



Cast of the Neandertal skull from La Ferrassie site In France



Comparison of Neandertal (left) and anatomically modern human (right) skeleton and body  
Modified after Janković et al. 2005; Stringer & Gamble 1993.



Comparison of a Neandertal (above) and anatomically modern human skull (below)  
Modified after Janković et al. 2005; Staski & Marks 1992.





Examination  
of a Neandertal  
tool kit



Tool making activity



### 3. Replicas of Neandertal fossils and archaeological finds

Provide replicas of important Neandertal fossils, including bones, tools, and artifacts found at archaeological sites. Students can study these items to better understand Neandertal anatomical and behavioral aspects.

### 4. Neandertal vs. anatomically modern human comparative chart

A visual chart comparing physical and cultural traits between Neandertals and anatomically modern human, such as shape of the skull, body size and other main anatomical features, tool kits, diet, and habitat. This could encourage critical thinking about human evolution and related environmental changes over time.

### 5. Stone tool kit

A hands-on kit that includes replicas of Neandertal stone tools. Students can learn how these tools were made and used in daily life. This tactile experience can make history come alive and spark curiosity.

### 6. Tool-making activity

An interactive activity where students can try flint-knapping or create simple tools. This allows them to understand the skill, precision, decision making process and effort that went into tool production in the Paleolithic era.

### 7. Fire-making experiment

A fire-making kit with safe materials (e.g., flint and steel, friction bow) can allow students to experience how Neandertals might have created fire for warmth, protection, and cooking.

### 8. Virtual reality (VR) experience

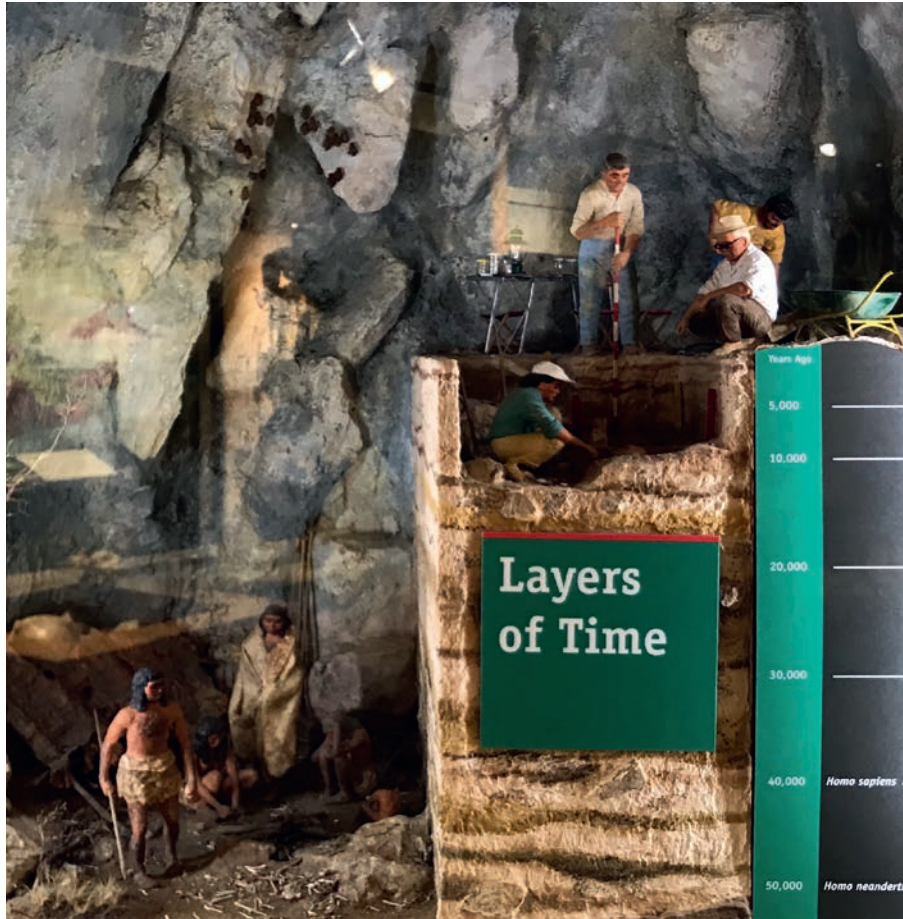
Incorporate a virtual reality experience where students can virtually explore a Neandertal cave or settlement. VR can provide an immersive way to experience daily life, habitats, and landscapes of the Ice Age.

### 9. Genetic inheritance activity

Create a genetics activity where students learn about Neandertal and anatomically modern human interbreeding, the discovery of Neandertal DNA in living humans, and what this means for our understanding of human history and biology.

### 10. Role-playing game (RPG)

Design a role-playing game where students take on the roles of Neandertals in various survival scenarios, making decisions about hunting, migration, or tool-making. This can encourage creative problem-solving while educating students about Neandertal survival strategies.



Diorama of a Neandertal site during archaeological excavations



AI can be a powerful tool for fueling discussion in the classroom. Here, an image of Neandertal/modern human family is created



**11. Climate change simulation**

Create an interactive lesson on how climate change impacted Neandertals. Use maps and charts to illustrate the Ice Age, glacial advances, and how these environmental factors influenced changes in floral and faunal communities, and geography (e.g. changes in the sea level and glacial covering).

**12. Neandertal habitat diorama or a scene using AI**

Include materials for students to build a small diorama of a Neandertal habitat, complete with miniature trees, animals, and figures representing a Neandertal group. This can help students visualize Neandertal life and environment. Alternatively, AI can be used to create images of Neandertal scenes. While using AI create multiple images using various description based on scientific research. Compare images created and discuss the scientific accuracy of such images. This can also lead to discussion on the role of AI.

**13. Comparison of Neandertal tools with toolkits of the Upper Palaeolithic**

Provide tool replicas or images that allow students to compare Neandertal tools with those of humans of the Upper Palaeolithic. This encourages a deeper understanding of technological innovations and changes from Middle to the Upper Paleolithic period.

**14. Interactive map of Neandertal sites**

Create a large interactive map showing key Neandertal discovery sites across Europe and Asia, including the Neander Valley in Germany, Shanidar Cave in Iraq, and others. Students can use markers to learn about the locations, climates, and discoveries made at each site.

**15. Language and communication discussion**

Present students with evidence for Neandertal language and speech capabilities. Have them debate whether Neandertals had language, using evidence such as the structure of the Neandertal vocal tract, cultural and behavioral aspects (hunting, toolmaking), or symbolic behavior (e.g. burials, non-utilitarian objects).

**16. Cross-curricular activity (art, history, and hard sciences)**

Provide interdisciplinary lesson plans that integrate humanistic (archaeology) and natural sciences (genetics, geology) into a cohesive learning module on Neandertals. This contributes to better understanding of different approaches of various scientific disciplines and importance of interdisciplinarity.

**17. Short documentary or video series**

Include a set of documentaries or videos that explain key aspects of Neandertal life, culture, and extinction. These media resources can offer both historical context and scientific updates on current research.

**18. Neandertal evolution activity**

Provide models or charts that show the evolution of Neandertals from earlier hominins like *Homo heidelbergensis*. Students can create evolutionary trees showing Neandertals' place in the human family tree.

**19. Tool function identification game**

In this game, students are presented with various tools (real or replicas) used by Neandertals, and they must identify the tool's function based on clues and group discussions.

**20. Cave dwelling model**

A model of a Neandertal cave dwelling, complete with sleeping areas, hearth, and tool areas, can be used as a visual and tactile teaching aid.

**21. Extinction theories debate**

Host a class debate on the different theories of Neandertal extinction – whether it was due to climate change, competition with anatomically modern newcomers, disease, or some other factor. Each student group can present evidence supporting their assigned theory.

**22. Paleolithic clothing craft**

Provide materials such as felt, faux fur, and leather strips for students to create Neandertal clothing based on archaeological findings. This can lead to discussions on climate adaptation and technological development.

**23. “A day in the life of a Neandertal” creative writing**

Ask students to write a short story or journal entry imagining a day in the life of a Neandertal, incorporating elements of survival, social interaction, and tool use. This allows students to engage creatively with the material.

**24. Prehistoric music and sounds**

Include audio recordings that simulate the types of sounds and music Neandertals may have produced, based on archaeological evidence (the Neandertal flute from Divje Babe site). Engage into discussion about different aspects of sound and music for living humans and what role may have had for Neandertals. Ethnomusicological examples may provide elements for discussion.

**25. Pleistocene animal cards**

A set of flashcards showing animals that coexisted with Neandertals, such as woolly mammoths, cave bears, and megafauna. Students can match the animals to their respective ecosystems and discuss their significance in Neandertal hunting and culture.



Modern humans in Neandertal clothes. Engaging activity for various ages



Visit to an archaeological site creates stronger emotional impact and long-lasting impressions



### 26. Museum or field trip to a Neandertal site

Create lesson plans that can be used in conjunction with a field trip to a museum featuring Neandertal exhibits, or to a known Neandertal site. Pre- and post-visit activities can include discussions on how museums present archaeological evidence, and discussion on the location and other aspects of the site.

### 27. Neandertal family tree

Provide a blank “family tree” that allows students to place Neandertals, anatomically modern humans, Denisovans, and other hominins in the correct order and geographical setting. This can be a useful exercise for teaching evolutionary relationships.

### 28. Mini excavation activity

Provide a sandbox or tray filled with replica fossils, bones, and artifacts for students to excavate using archaeological tools like brushes and picks. This can teach them proper excavation techniques while learning about discovery processes and interpretation of finds.

### 29. Ice Age survival simulation

Host a simulation where students must “survive” in an Ice Age setting by making decisions about food, shelter, and tools based on available materials and climate conditions. This helps them understand Neandertal adaptability and challenges.

### 30. Ethical debate on Neandertal DNA research

Host a classroom debate on the ethics of using Neandertal DNA for research, exploring topics such as cloning, genetic engineering and manipulation.





Excavation activity as hands-on approach creates better understanding of scientific methods





## Lesson plan: Understanding Neandertals

**Objective:** Students will learn about Neandertal evolutionary history, their physical characteristics, lifestyle, and their place in human evolution. By the end of the lesson, students should be able to describe Neandertal traits, habitats, and cultural practices.

**Materials:** Interactive 3D models of Neandertals (accessible via tablets or computers)  
Worksheets (provided below)  
Projector or smartboard  
Markers and chart paper  
Videos/documentaries on Neandertals  
Reference books and articles

**Duration:** 90 minutes

### Lesson outline

#### Introduction (15 minutes)

**Hook:** Show a brief video or documentary segment on Neandertals.

**Discussion:** Ask students what they know about Neandertals. Write their responses on the board.

**Objective:** Explain the goals of the lesson.

Main activity (50 minutes)

Interactive 3D model exploration (20 minutes)

Divide students into small groups. Provide each group with a tablet/computer to explore interactive 3D models of Neandertals. Instruct students to note down physical characteristics and any tools or artifacts associated with Neandertals.

Worksheet activity (20 minutes)

Hand out worksheets to each student (see below for worksheet details). Students complete the worksheets individually or in pairs, using information from the 3D models and reference materials. Class discussion (10 minutes)

Groups share their findings with the class. Discuss the significance of Neandertal traits and cultural practices.

Conclusion (15 minutes). Summarize key points:

Review the main characteristics, habitats, and cultural aspects of Neandertals.

Q&A session: Address any questions or misconceptions.

Homework assignment: write a short essay on “*What modern humans can learn from Neandertals.*”



## Worksheet: Understanding Neandertals

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Physical characteristics:** Describe the physical appearance of Neandertals based on the 3D model. How do their physical traits compare to modern humans?

**Habitat and lifestyle:** What kind of environments did Neandertals live in? List three tools or artifacts commonly used by Neandertals. Describe the daily life of a Neandertal family.

**Cultural practices:** What evidence do we have of Neandertal art or symbolic behavior? how did Neandertals care for their sick and elderly?

**Significance:** Why is it important to study Neandertals? What can studying Neandertals teach us about human evolution?

#### Additional activities

**Art project:** Create a Neandertal tool or piece of art using clay or other craft materials.

**Research project:** Investigate and present on a specific Neandertal site or discovery.

**Role-Play:** Have students act out a day in the life of a Neandertal family, focusing on hunting, gathering, and social interactions.

By integrating interactive models, discussions, and hands-on activities, this lesson plan aims to provide a comprehensive understanding of Neandertals, highlighting their importance in our evolutionary history.



## Lesson plan: Understanding Neandertals through onsite visit and interpretation

**Grade level:** Middle school/High school

**Subject:** history, archaeology, and anthropology

**Duration:** full-day onsite visit (5-6 hours) + 1-hour follow-up session

**Location:** local museum, archaeological site, or science center

**Learning objectives:** Develop an understanding of Neandertal life, culture, and their place in human evolution. Analyze archaeological evidence and interpret artifacts. Compare Neandertals to early *Homo sapiens sapiens* in terms of tools, social structures, and survival strategies. Foster critical thinking through hands-on activities and reflection on the role of archaeology in understanding the past.

### Pre-visit preparation (1 hour)

**Objective:** Equip students with background knowledge on Neandertals and archaeology to enhance their onsite learning experience.

**Introduction to Neandertals:** Provide an overview of Neandertal life, focusing on their habitat, physical characteristics, and tools. Use visual aids like maps showing where Neandertals lived, and charts comparing Neandertals and *Homo sapiens sapiens*. Introduce the role of archaeology in uncovering Neandertal history. Explain how archaeologists find, study, and interpret fossils and artifacts.

**Pre-visit worksheet:** distribute a worksheet with questions on Neandertal tools, cultural practices, and key archaeological sites (like the Neander Valley in Germany or La Chapelle-aux-Saints in France, or any local site of choosing). Ask students to research and prepare for the visit by reading brief articles or watching short videos on Neandertals. This will provide a context for what they will see during the onsite visit.



## Onsite visit: museum/archaeological site (5-6 hours)

**Objective:** Engage with real artifacts, exhibits, and reconstructions to deepen students' understanding of Neandertal culture and survival.

### Part 1: guided tour (1.5-2 hours)

**Exhibition on Neandertals:** Begin with a guided tour of the museum or archaeological site. The guide will show the students Neandertal fossils, tools, and reconstructions of their habitats.

**Key discussion points:** Highlight the significance of Neandertal tool use, fire control, and social structures. Explain how Neandertals adapted to their environment during the Ice Age. Discuss the interactions and possible interbreeding between Neandertals and *Homo sapiens sapiens*, and their eventual extinction.

### Part 2: hands-on archaeology workshop (1-1.5 hours)

Students participate in a hands-on archaeology activity, such as:

**Excavation simulation:** set up a mock excavation site where students can dig for replica Neandertal artifacts. Students will learn how to identify and catalog artifacts, like stone tools or bone fragments.

**Artifact analysis:** Once students “excavate” the items, they can work in teams to analyze the finds. They will discuss what each artifact might have been used for and what it reveals about Neandertal life.

### Part 3: interactive exhibit or VR experience (1 hour)

if available, allow students to experience an interactive virtual reality tour of a Neandertal settlement or cave. They can visualize the Ice Age environment and daily Neandertal activities, such as hunting, tool-making, or social interaction.

### Part 4: group reflection & discussion (30-45 minutes)

Gather the students for a group reflection session, where they can discuss their favorite parts of the visit, the most surprising facts they learned, and how their perception of Neandertals has changed. Lead a discussion on the relevance of studying Neandertals today – what can learning about them teach us about modern humans and our own evolutionary history?



## Follow-up classroom session (1 hour)

**Objective:** Consolidate learning from the onsite visit and encourage students to reflect on their experience through group discussions and creative projects.

**Group discussion:** Review key concepts and artifacts from the onsite visit. Ask students to reflect on how the onsite experience helped them better understand Neandertal life compared to classroom learning alone.

**Post-visit worksheet:** Distribute a post-visit worksheet where students answer questions based on the artifacts and information they encountered during the trip. Questions might include: How did Neandertals adapt to their environment? What evidence suggests Neandertals were capable of symbolic thought (e.g., burial rituals, possible art)? What key similarities and differences do you see between Neandertals and *Homo sapiens sapiens*?

**Creative project:** Students can either: Create a visual representation (a poster, drawing, or model) of a Neandertal settlement. Write a reflective journal entry or short story imagining a day in the life of a Neandertal, incorporating facts from the visit. Prepare a short presentation on the significance of a specific Neandertal artifact or site.

### ASSESSMENT:

**Participation:** Engagement during the onsite visit and hands-on activities.

**Worksheets:** Pre- and post-visit worksheets will help gauge the student's understanding of Neandertal life, culture, and their impact on human history.

**Creative project:** Assess creativity, accuracy, and ability to synthesize information from the onsite visit into their project.

**Conclusion:** This lesson plan, centered on an onsite visit and interpretation, provides an immersive, interdisciplinary experience for students to explore Neandertals and their significance in human history. The combination of hands-on activities, reflective discussions, and creative projects ensures that students not only learn facts but also engage deeply with the subject matter.









# Part II

## GUIDELINES FOR BEST PRACTICE IN:

Neandertal Heritage Presentation

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Management of  
Neandertal Heritage

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Valorization of Neandertal heritage  
in Tourism

NEANDERTAL  
HERITAGE  
PRESENTATION





## Introduction: Heritage presentation

Cultural heritage presentation is a multifaceted endeavour that seeks to preserve, interpret, and share the rich tapestry of human history and cultural expression. It encompasses a wide range of practices, from museum exhibits and heritage site tours to digital archives and interactive multimedia displays. The goal is to provide meaningful, engaging, and educational experiences that connect people with their past and foster a sense of identity and continuity.

Effective cultural heritage presentation begins with thorough research and a deep understanding of the subject matter. This includes not only the historical and cultural context but also the tangible and intangible elements that define a culture. Authenticity and accuracy are paramount, requiring collaboration with historians, archaeologists, and community representatives. Engagement is another critical component. Utilizing interactive technologies such as virtual reality, augmented reality, and immersive storytelling can bring history to life, making it accessible and relatable to diverse audiences. Educational programs, workshops, and hands-on activities further enrich the experience, promoting active learning and participation. Moreover, cultural heritage presentation must be inclusive and respectful, acknowledging diverse perspectives and ensuring that all voices are heard. By embracing a holistic approach that blends education, engagement, and respect, cultural heritage presentations can inspire a deeper appreciation for our shared human experience and contribute to the preservation of cultural legacy for future generations.



Scientific-based reconstruction of a Neandertal scene.  
Engaging scientists in presentation of heritage is essential  
Illustration: Simon Bogojević Narath © Archeological Museum in Zagreb



## General principles

Effective cultural heritage presentation hinges on accuracy, engagement, inclusivity, sustainability, and education.

**Accuracy:** ensuring historical and cultural accuracy is fundamental. Presentations must be grounded in rigorous research and verified sources to avoid perpetuating myths or inaccuracies. Collaborating with experts such as historians, archaeologists, and cultural anthropologists helps maintain the integrity of the information conveyed.

**Engagement:** capturing and retaining the audience's interest is essential. Utilizing interactive technologies like virtual reality, augmented reality, and interactive displays can make cultural heritage more relatable and vivid. Engaging narratives and storytelling techniques also play a crucial role in connecting audiences emotionally with the heritage being presented.

**Inclusivity:** acknowledging and representing diverse perspectives ensures that cultural heritage presentations resonate with a broad audience. This includes the voices of local communities and minority groups, whose histories and contributions have often been overlooked. Inclusivity fosters a more comprehensive and truthful portrayal of heritage.

**Sustainability:** cultural heritage presentations should prioritize sustainability, both in the preservation of artifacts and the methods used in presentations. This includes ethical sourcing of materials, environmentally friendly practices, and fostering awareness about the importance of preserving heritage for future generations.



**Education:** educational value is a cornerstone of cultural heritage presentation. Programs should be designed to inform and enlighten, catering to various learning styles and age groups. Workshops, guided tours, lectures, and hands-on activities can deepen understanding and appreciation, making heritage accessible and meaningful to all.

By adhering to these principles, cultural heritage presentations can effectively preserve and share the richness of human history, fostering a deeper appreciation and connection to our shared past.

Two valuable resources for understanding the art of heritage interpretation and presentation:

- Freeman Tilden: *Interpreting our Heritage* (1957)
- ICOMOS Charter for the Interpretation and Presentation of Cultural Heritage Sites



## Freeman Tilden and Heritage Interpretation

Freeman Tilden is widely regarded as a pioneer in the field of heritage interpretation, having shaped the way natural, cultural, and historical sites are presented to the public. His influential book, *Interpreting Our Heritage* (1957), outlined six key principles of interpretation that continue to be foundational for professionals in parks, museums, and educational institutions around the world. Tilden's approach to interpretation emphasizes more than just conveying facts – it focuses on engaging visitors in meaningful ways, fostering personal connections, and provoking deeper thought about the significance of the sites and artifacts being presented.

### **Tilden's Six Principles of Heritage Interpretation:**

- 1) *The chief aim of Interpretation is not instruction, but provocation.*
- 2) *Any interpretation that does not somehow relate what is being displayed or described to something within the personality or experience of the visitor will be sterile*
- 3) *Information does not equal interpretation, but all interpretation contains information.*
- 4) *Interpretation is an art which combines many arts regardless of subject material. Any art is to some degree teachable.*
- 5) *Interpretation should aim to present a whole rather than a part.*
- 6) *Interpretation for children must be designed specifically for children, and not simply a dilution of programs and information for adults.*

At the core of Tilden's philosophy is the idea that interpretation should not simply be the presentation of information but should involve inspiring and educating people through emotional and intellectual engagement. His first principle highlights this notion by stating that interpretation must relate to the visitor's own life and experiences. Tilden believed that for interpretation to be effective, it had to make content relevant to the individual, creating a personal link between the visitor and the heritage being interpreted. By



drawing on visitors' prior knowledge or experiences, interpreters can spark a deeper interest and appreciation for the subject matter, whether it's a historical event, natural landscape, or cultural artifact.

The second principle of interpretation asserts that interpretation is an art, and merely presenting facts is not enough. For Tilden, effective interpretation required creativity, narrative skill, and emotional resonance. This principle suggests that interpreters should move beyond dry, factual presentations and use storytelling, symbolism, and thematic approaches to connect with audiences. By presenting information in an engaging, artistic manner, interpreters can captivate their audience and make the experience more memorable and meaningful.

Tilden's third principle emphasizes that the goal of interpretation should not be instruction but provocation. Rather than telling visitors what to think, interpreters should provoke thought, curiosity, and reflection. Tilden believed that provoking the visitor's imagination or critical thinking leads to a more lasting impact than simply delivering a set of facts. This aligns with modern educational theories, which argue that active engagement and critical thinking foster deeper learning than passive reception of information.

The fourth principle underscores the importance of presenting a whole story rather than fragmented facts. Tilden argued that interpretation should provide a cohesive, holistic view of the subject matter, offering context and connections between the parts. For example, presenting a historical artifact should include not just what it is, but its relevance within the broader cultural, historical, or environmental landscape. This principle ensures that visitors come away with a well-rounded understanding rather than isolated bits of information.

Tilden's fifth principle focuses on the importance of tailoring interpretation to children in a way that suits their needs, capacities, and interests. He recognized that children have different ways of learning and engaging with information, and that interpretation for young audiences should be distinct from that for adults. Engaging children in ways that are interactive, fun, and relatable fosters early connections to heritage and instills a lifelong appreciation for history, culture, and nature.





Finally, Tilden's sixth principle suggests that interpretation should aim to reveal a deeper truth or meaning rather than just present information about an object or place. The goal of interpretation, in his view, was to inspire a greater appreciation for the resource itself—whether it is a natural landscape, an artifact, or a historical site. This principle encourages interpreters to move beyond the surface and explore the deeper significance or values that these resources represent.

In conclusion, Freeman Tilden's principles of interpretation revolutionized how heritage professionals engage with the public. His focus on making interpretation meaningful, artistic, and thought-provoking laid the groundwork for modern interpretive practices. Tilden's legacy is seen in national parks, museums, and historic sites worldwide, where interpreters continue to use his methods to create memorable, educational, and emotionally resonant experiences for visitors. His emphasis on connecting the visitor personally with the subject matter ensures that interpretation is not just about learning facts but about fostering a deeper appreciation for the world's cultural and natural heritage.



## The ICOMOS Charter for the interpretation and presentation of cultural heritage sites

*Prepared under the Auspices of the ICOMOS International Scientific Committee on Interpretation and Presentation of Cultural Heritage Sites Ratified by the 16th General Assembly of ICOMOS, Québec (Canada), on 4 October 2008*

From the vast range of surviving material remains and intangible values of past communities and civilisations, the choice of what to preserve, how to preserve it, and how it is to be presented to the public are all elements of site interpretation. They represent every generation's vision of what is significant, what is important, and why material remains from the past should be passed on to generations yet to come. The need for a clear rationale, standardised terminology, and accepted professional principles for Interpretation and Presentation\* is evident. In recent years, the dramatic expansion of interpretive activities at many cultural heritage sites and the introduction of elaborate interpretive technologies and new economic strategies for the marketing and management of cultural heritage sites have created new complexities and aroused basic questions that are central to the goals of both conservation and the public appreciation of cultural heritage sites throughout the world:

- What are the accepted and acceptable goals for the Interpretation and Presentation of cultural heritage sites?
- What principles should help determine which technical means and methods are appropriate in particular cultural and heritage contexts?
- What general ethical and professional considerations should help shape Interpretation and Presentation in light of its wide variety of specific forms and techniques?

The purpose of this Charter is therefore to define the basic principles of Interpretation and Presentation as essential components of heritage conservation efforts and as a means of enhancing public appreciation and understanding of cultural heritage sites. In recognizing that interpretation and presentation are part of the overall process of cultural heritage conservation and management, this Charter seeks to establish seven cardinal principles, upon which Interpretation and Presentation – in whatever form or medium is deemed appropriate in specific circumstances – should be based.



**Principle 1: Access and understanding**

Interpretation and presentation programmes should facilitate physical and intellectual access by the public to cultural heritage sites.

**Principle 2: Information sources**

Interpretation and presentation should be based on evidence gathered through accepted scientific and scholarly methods as well as from living cultural traditions.

**Principle 3: Context and setting**

The Interpretation and Presentation of cultural heritage sites should relate to their wider social, cultural, historical, and natural contexts and settings.

**Principle 4: Authenticity**

The Interpretation and presentation of cultural heritage sites must respect the basic tenets of authenticity in the spirit of the Nara Document (1994).

**Principle 5: Sustainability**

The interpretation plan for a cultural heritage site must be sensitive to its natural and cultural environment, with social, financial, and environmental sustainability among its central goals.

**Principle 6: Inclusiveness**

The Interpretation and Presentation of cultural heritage sites must be the result of meaningful collaboration between heritage professionals, host and associated communities, and other stakeholders.

**Principle 7: Research, training, and evaluation**

Continuing research, training, and evaluation are essential components of the interpretation of a cultural heritage site.

Full text of the Charter:

[https://www.icomos.org/images/DOCUMENTS/Charters/interpretation\\_e.pdf](https://www.icomos.org/images/DOCUMENTS/Charters/interpretation_e.pdf)







## Presenting and interpreting Neandertal heritage

Neandertal heritage offers a fascinating glimpse into our evolutionary past and underscores the complexity of human history. Neandertals, our closest extinct human relatives, lived in Europe and western Asia from about 400,000 to 40,000 years ago. Their legacy is preserved not only in the archaeological record but also within the DNA of modern humans, as many of us carry small amounts of Neandertal genetic material. Exploring Neandertal heritage involves examining their sophisticated tool-making skills, use of fire, and potential symbolic behaviours. Neandertals crafted intricate stone tools and adapted to diverse environments, showcasing their ingenuity and resilience. Evidence of their use of fire for cooking, warmth, and protection further highlights their advanced survival strategies. Additionally, recent discoveries suggest they might have engaged in symbolic activities, such as creating art and burying their dead, indicating cognitive and cultural complexity. Presenting Neandertal heritage accurately and engagingly is crucial. It requires a blend of scientific rigor and innovative methods, such as interactive exhibits and multimedia displays, to bring their world to life. Inclusive narratives that respect and represent their contributions to our shared history are essential. By appreciating Neandertal heritage, we gain valuable insights into human evolution and the traits that define us today. Neandertal heritage is not just a chapter of the distant past; it is a part of our collective story. Understanding and preserving this heritage enriches our knowledge of human diversity and adaptability, reminding us of the deep connections we share with our ancient relatives.



Museum diorama provides real-scale model for visitors  
© Krapina Neanderthal Museum





## Guidelines for best practice in Neandertal heritage presentation

Neandertals, one of humanity's closest extinct relatives, offer a unique lens through which we can better understand human evolution, adaptation, and culture. Presenting Neandertal heritage effectively involves not only showcasing the latest scientific discoveries but also engaging diverse audiences in ways that foster curiosity, empathy, and respect for their complex existence. Best practice guidelines for Neandertal heritage presentation must balance scientific accuracy, ethical considerations, and visitor engagement. The presentation of Neandertal heritage is a complex and evolving field that requires a balance between scientific rigor, ethical responsibility, and public engagement. By following these guidelines, heritage managers can ensure that Neandertal sites, artifacts, and stories are presented in ways that are accurate, respectful, and accessible. In doing so, they help foster a deeper appreciation for the role Neandertals played in human evolution and ensure that their legacy continues to inform and inspire future generations.

### 1. Scientific accuracy and evidence-based interpretation

At the heart of any heritage presentation is the need for scientific accuracy. The presentation of Neandertal heritage should reflect the latest research in paleoanthropology, archaeology, and genetics. Misrepresentations, outdated models, and inaccuracies can lead to the perpetuation of myths and misunderstandings about Neandertals. Given the rapid pace of discoveries, particularly with advances in ancient DNA analysis, it is essential to update presentations regularly to reflect the most current understanding of Neandertal biology, behavior, and interactions with other hominin species and populations.

### 2. Combatting stereotypes and misconceptions

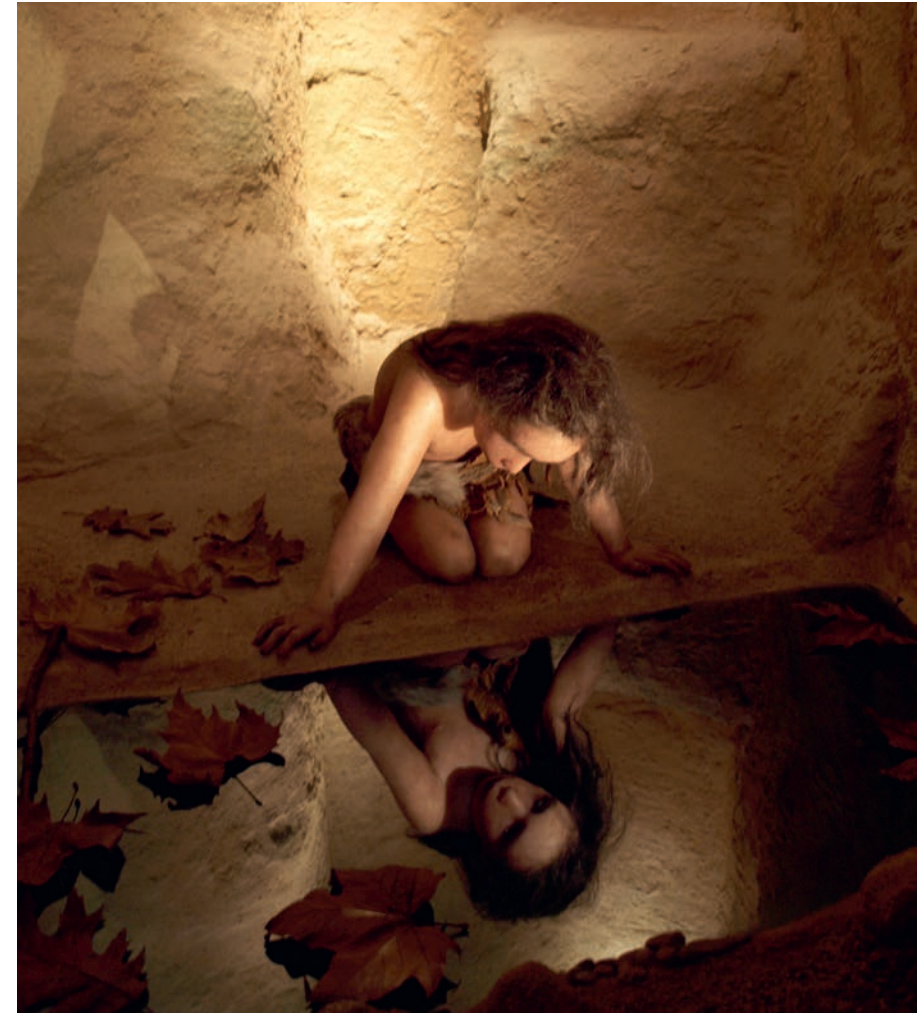
For decades, Neandertals were often depicted as brutish, unintelligent, and fundamentally different from modern humans. These misconceptions have been debunked by modern research, which reveals that Neandertals were skilled toolmakers, capable of symbolic thought, and engaged in complex social behaviors. Heritage presentations should actively work to challenge these outdated stereotypes, offering a more nuanced portrayal of Neandertals as sophisticated beings with cultural and cognitive capacities comparable to early *Homo sapiens sapiens*.

### 3. Humanizing Neandertals

In addition to dispelling stereotypes, Neandertal heritage presentations should emphasize the human qualities of Neandertals. Highlighting their family structures, use of



symbolic objects, burial practices, and survival strategies helps bridge the gap between them and modern humans. Presenting Neandertals as emotionally and socially complex beings fosters empathy and a deeper connection between audiences and their prehistoric ancestors. This approach helps the public view Neandertals as an integral part of human evolution, rather than as an evolutionary “dead-end.”



Scenes from everyday life help to fight stereotypes and foster a deeper connection between the audience and our prehistoric relatives

© Krapina Neanderthal Museum

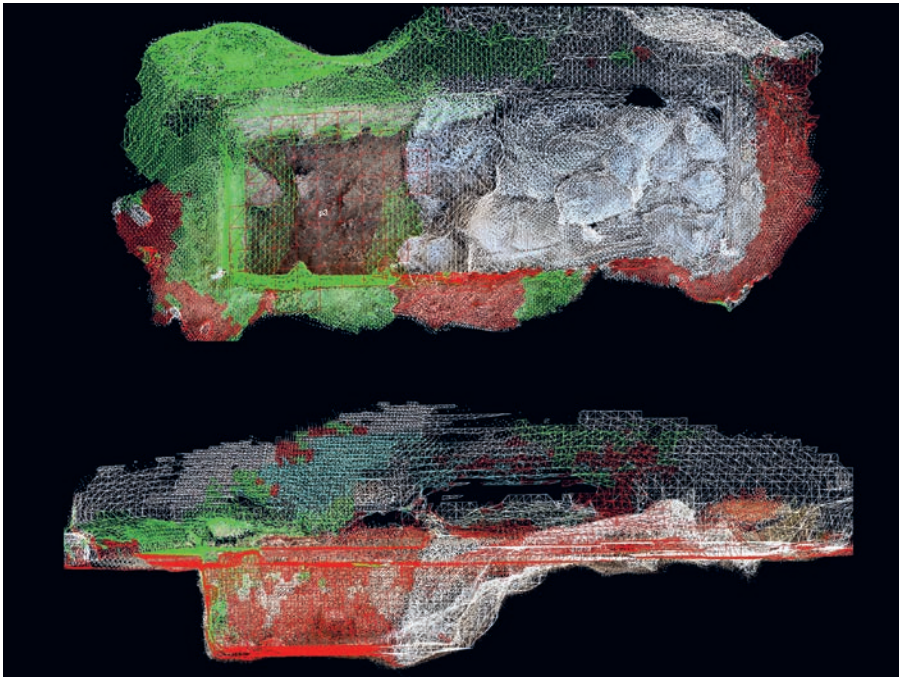


#### 4. Narrative storytelling and emotional engagement

The presentation of heritage sites and artifacts should not just be factual but should tell compelling stories that engage visitors emotionally. A narrative-driven approach allows for a more immersive experience. For example, presenting the story of a Neandertal family struggling to survive in Ice Age Europe can resonate with visitors more effectively than simply displaying tools or skeletal remains. The goal is to create a deeper emotional connection between visitors and Neandertal heritage, making the experience both memorable and educational.

#### 5. Interactive and immersive experiences

Modern audiences, particularly younger generations, are increasingly drawn to interactive and immersive experiences. Heritage presentations should incorporate technologies like virtual reality (VR), augmented reality (AR), and 3D modeling to create more dynamic and engaging exhibitions. For example, visitors could use VR to explore a digitally reconstructed Neandertal campsite, allowing them to “walk through” the environment and see how Neandertals might have lived. These experiences not only enhance understanding but also make the past feel more immediate and real.



Advances in technology provide a novel way of presentation, particularly important to draw younger audience



#### 6. Contextualizing Neandertal sites and artifacts

It is important to provide context for Neandertal artifacts, sites, and remains. Rather than presenting isolated objects, exhibitions should explain the broader environmental, social, and cultural contexts in which Neandertals lived. Understanding their interactions with their environment, the challenges they faced during the Ice Age, and their eventual extinction provides a more holistic view of their lives. This helps visitors appreciate the complexity of Neandertal existence and their ability to adapt to difficult circumstances.

#### 7. Multidisciplinary approach

Neandertal heritage spans various fields of study, including archaeology, anthropology, genetics, and environmental science. Presentations should adopt a multidisciplinary approach that integrates these fields to provide a well-rounded understanding of Neandertal life. Collaboration with scientists across disciplines can lead to more comprehensive exhibits that cover not only physical artifacts but also insights into Neandertal diets, health, genetic makeup, and interactions with early Homo sapiens.

#### 8. Educational programs and public engagement

Heritage presentation should include robust educational programs tailored to different audiences. For younger visitors, interactive exhibits, school programs, and workshops can provide hands-on learning opportunities. For adult visitors, lectures, guided tours, and in-depth discussions of recent discoveries can offer deeper engagement. Public outreach, such as community events and citizen science programs, can foster a broader appreciation for Neandertal heritage and provide opportunities for the public to participate in ongoing research and conservation efforts.



Creating target audience specific activities helps is essential part of modern educational and presentational practices





### 9. Ethical presentation of Neandertal remains

Presenting human remains, including those of Neandertals, requires ethical sensitivity. Remains should be treated with the same respect accorded to modern human remains, and their display should not be sensationalized. Visitors should be informed about the ethical considerations behind the presentation of Neandertal skeletons, and the exhibits should focus on their scientific and cultural importance rather than turning them into objects of curiosity.

### 10. Inclusivity and accessibility

Neandertal heritage should be presented in ways that are inclusive and accessible to a diverse range of audiences. This includes ensuring that exhibits are designed to accommodate people with disabilities through features like audio guides, braille labels, and wheelchair-accessible spaces. Multilingual signage and educational materials should also be made available, ensuring that non-native speakers can engage with the content. Inclusivity ensures that Neandertal heritage can be appreciated by people of all age groups, backgrounds and walks of life.

### 11. Sustainability and conservation of sites

The physical conservation of Neandertal sites is crucial for long-term heritage preservation. Many Neandertal sites are sensitive to environmental changes and human activity, making sustainable management practices essential. Limiting visitor access to particularly fragile areas, using eco-friendly building materials for site infrastructure, and employing non-invasive archaeological techniques are all important steps in conserving these sites for future generations.

### 12. International collaboration and knowledge sharing

Many important Neandertal sites are spread across Europe and Asia, making international collaboration a key component of effective heritage management. Cross-border cooperation among researchers, heritage managers, and government agencies can lead to better protection and presentation of Neandertal sites. This includes sharing best practices, pooling resources, and collaborating on public outreach efforts. International collaboration can also foster a shared sense of responsibility for the preservation of Neandertal heritage, which is part of our collective human history.

### 13. Preserving and showcasing Neandertal art and symbolic behavior

One of the most intriguing aspects of Neandertal life is their potential for symbolic thought and artistic expression. Recent discoveries, such as possible cave paintings attributed to Neandertals, suggest that they engaged in symbolic behavior. Exhibitions should highlight these discoveries, exploring the implications of Neandertal art and symbolic practices for our understanding of their cognitive abilities. Presenting Neandertal art alongside that of early *Homo sapiens sapiens* can provide visitors with a more nuanced view of their creative and intellectual capacities.



Sustainable protection and preservation of the sites is crucial and includes active dialogue of various stakeholders and experts



Public participation in scientific and other activities promotes deeper connection to the past





#### **14. Public participation in heritage preservation**


Engaging the public in the preservation and management of Neandertal heritage can foster a deeper connection to the past. Citizen science projects, where the public participates in archaeological digs or conservation efforts, provide valuable data while also cultivating a sense of ownership and responsibility for preserving heritage. Public participation not only enhances research efforts but also encourages broader awareness of the importance of Neandertal heritage.

#### **15. Use of digital platforms for broader access**

In today's digital age, it is important to make Neandertal heritage accessible to global audiences. Websites, virtual tours, online exhibits, and educational videos can reach people who may never have the opportunity to visit a physical site or museum. Digital platforms allow for broader dissemination of knowledge and can engage audiences across the world. For example, virtual museum tours can give users an in-depth look at Neandertal artifacts from the comfort of their own homes, helping to democratize access to this important part of human history.

These guidelines create a respectful, engaging, and scientifically grounded framework for presenting Neandertal heritage. By following these guidelines, presentations of Neandertal heritage can be both educational and inspiring, fostering a deeper appreciation for our ancient relatives and their contributions to human history. This approach not only enriches public knowledge but also contributes to the preservation and respect of our shared cultural heritage.





GUIDELINES FOR  
BEST PRACTICE IN  
MANAGEMENT OF  
NEANDERTAL HERITAGE





## Introduction: Archaeological heritage management



Archaeological heritage management is a multidisciplinary field dedicated to the preservation, protection, and promotion of archaeological sites and artifacts. This practice involves a combination of scientific research, conservation techniques, policy-making, and public engagement to ensure that valuable cultural and historical resources are safeguarded for future generations. The core objective of archaeological heritage management is to balance the need for preservation with the desire for public access and education. Effective management requires a thorough understanding of the cultural significance of archaeological sites and artifacts, as well as the environmental and human factors that threaten their integrity. This often involves close collaboration with archaeologists, historians, conservators, and local communities to develop and implement strategies that mitigate these threats. Public involvement is also crucial in archaeological heritage management. Educational programs, museum exhibitions, and community events help to raise awareness about the importance of preserving our archaeological heritage. By fostering a sense of shared responsibility and appreciation, these initiatives can inspire individuals and communities to actively participate in conservation efforts. In an era where development and urbanization pose significant risks to archaeological sites, heritage management provides a framework for sustainable preservation. It ensures that these non-renewable resources are protected, allowing future generations to study, appreciate, and learn from the tangible remains of our past. Archaeological heritage management is crucial for preserving and understanding our collective past. Here are five core principles that guide this field:

**Preservation in situ:** The foremost principle is preserving archaeological sites in their original location. In situ preservation maintains the context of artifacts and features, which is essential for accurate interpretation. This approach minimizes disturbance and prevents loss of information that often occurs during excavation and relocation.

**Sustainable management:** Balancing preservation with public access and educational opportunities is vital. Sustainable management ensures that archaeological sites are protected from environmental degradation, tourism pressures, and urban development. It involves careful planning and continuous monitoring to maintain the site's integrity while allowing responsible public engagement.



**Scientific research:** Ongoing research is fundamental to archaeological heritage management. Scientific studies, including excavation, analysis, and conservation techniques, help uncover the historical significance of sites and artifacts. Research should be methodical, peer-reviewed, and contribute to the broader body of archaeological knowledge.

**Community involvement:** Engaging local communities in heritage management fosters a sense of ownership and responsibility. Community involvement includes education, collaboration in site management, and participation in decision-making processes. This principle ensures that heritage sites benefit and reflect the values of the people most closely connected to them.

**Legal protection and policy:** Robust legal frameworks and policies are essential for the effective management of archaeological heritage. Laws should protect sites from looting, unauthorized excavations, and destruction. Policies must promote ethical standards in archaeology, enforce compliance, and support international cooperation in heritage conservation.

These principles collectively ensure the responsible stewardship of archaeological sites, safeguarding them for future generations while enriching our understanding of human history.



## Charter for the protection and management of the archaeological heritage (1990)

Prepared by the International Committee for the Management of Archaeological Heritage (ICAHM) and approved by the 9th General Assembly in Lausanne in 1990.

### DEFINITION AND INTRODUCTION

The “archaeological heritage” is that part of the material heritage in respect of which archaeological methods provide primary information. It comprises all vestiges of human existence and consists of places relating to all manifestations of human activity, abandoned structures, and remains of all kinds (including subterranean and underwater sites), together with all the portable cultural material associated with them.

### INTEGRATED PROTECTION POLICIES

The archaeological heritage is a fragile and non-renewable cultural resource. Land use must therefore be controlled and developed in order to minimise the destruction of the archaeological heritage. Policies for the protection of the archaeological heritage should constitute an integral component of policies relating to land use, development, and planning as well as of cultural, environmental and educational policies. The policies for the protection of the archaeological heritage should be kept under continual review, so that they stay up to date. The creation of archaeological reserves should form part of such policies. The protection of the archaeological heritage should be integrated into planning policies at international, national, regional and local levels. Active participation by the general public must form part of policies for the protection of the archaeological heritage. This is essential where the heritage of indigenous peoples is involved. Participation must be based upon access to the knowledge necessary for decision-making. The provision of information to the general public is therefore an important element in integrated protection.





### LEGISLATION AND ECONOMY

The protection of the archaeological heritage should be considered as a moral obligation upon all human beings; it is also a collective public responsibility. This obligation must be acknowledged through relevant legislation and the provision of adequate funds for the supporting programmes necessary for effective heritage management. The archaeological heritage is common to all human society and it should therefore be the duty of every country to ensure that adequate funds are available for its protection. Legislation should afford protection to the archaeological heritage that is appropriate to the needs, history, and traditions of each country and region, providing for in situ protection and research needs. Legislation should be based on the concept of the archaeological heritage as the heritage of all humanity and of groups of peoples, and not restricted to any individual person or nation.

### SURVEY

The protection of the archaeological heritage must be based upon the fullest possible knowledge of its extent and nature. General survey of archaeological resources is therefore an essential working tool in developing strategies for the protection of the archaeological heritage. Consequently archaeological survey should be a basic obligation in the protection and management of the archaeological heritage. At the same time, inventories constitute primary resource databases for scientific study and research. The compilation of inventories should therefore be regarded as a continuous, dynamic process. It follows that inventories should comprise information at various levels of significance and reliability, since even superficial knowledge can form the starting point for protectional measures.

### INVESTIGATION

Archaeological knowledge is based principally on the scientific investigation of the archaeological heritage. Such investigation embraces the whole range of methods from non-destructive techniques through sampling to total excavation. It must be an overriding principle that the gathering of information about the archaeological heritage should not destroy any more archaeological evidence than is necessary for the protectional or scientific objectives of the investigation. Non-destructive techniques, aerial and ground survey, and sampling should therefore be encouraged wherever possible, in preference to total excavation. As excavation always implies the necessity of making a selection of evidence to be documented and preserved at the cost of losing other information and possibly even the total destruction of the monument, a decision to excavate should only be taken after thorough consideration. Excavation should be carried out on sites and monuments threatened by development, land-use change, looting, or natural deterioration.



### MAINTENANCE AND CONSERVATION

The overall objective of archaeological heritage management should be the preservation of monuments and sites in situ, including proper long-term conservation and curation of all related records and collections etc. Any transfer of elements of the heritage to new locations represents a violation of the principle of preserving the heritage in its original context. This principle stresses the need for proper maintenance, conservation and management. It also asserts the principle that the archaeological heritage should not be exposed by excavation or left exposed after excavation if provision for its proper maintenance and management after excavation cannot be guaranteed. Local commitment and participation should be actively sought and encouraged as a means of promoting the maintenance of the archaeological heritage. This principle is especially important when dealing with the heritage of indigenous peoples or local cultural groups. In some cases it may be appropriate to entrust responsibility for the protection and management of sites and monuments to indigenous peoples.

### PRESENTATION, INFORMATION, RECONSTRUCTION

The presentation of the archaeological heritage to the general public is an essential method of promoting an understanding of the origins and development of modern societies. At the same time it is the most important means of promoting an understanding of the need for its protection. Presentation and information should be conceived as a popular interpretation of the current state of knowledge, and it must therefore be revised frequently. It should take account of the multifaceted approaches to an understanding of the past. Reconstructions serve two important functions: experimental research and interpretation. They should, however, be carried out with great caution, so as to avoid disturbing any surviving archaeological evidence, and they should take account of evidence from all sources in order to achieve authenticity. Where possible and appropriate, reconstructions should not be built immediately on the archaeological remains, and should be identifiable as such.

Full text of the Charter:

<https://www.icomos.org/en/practical-information/179-articles-en-francais/ressources/charters-and-standards/160-charter-for-the-protection-and-management-of-the-archaeological-heritage>



## Neandertal heritage management

Neandertal heritage management involves the preservation, study, and promotion of the archaeological and cultural sites associated with Neandertals. As one of our closest prehistoric relatives, Neandertals provide crucial insights into human evolution, social behavior, and adaptation strategies. Effective heritage management ensures that these insights are protected and shared with future generations. Preserving Neandertal sites requires meticulous archaeological practices. Excavations must be conducted with care to avoid damaging delicate artifacts and remains. Advanced technologies like ground-penetrating radar and 3D modeling are increasingly used to map and document sites without intrusive digging. Conservation of discovered items, such as tools or bones, is equally vital, often necessitating climate-controlled environments and specialized treatment.

Education and public engagement are critical components of heritage management. Museums and educational programs play a key role in making Neandertal heritage accessible and engaging to the public. Interactive exhibits, virtual reality experiences, and educational workshops help demystify Neandertal life and highlight their significance in human history. Legislation and international cooperation are also essential. Heritage management often requires navigating complex legal frameworks to protect sites from looting, urban development, and environmental threats. Collaboration between governments, academic institutions, and local communities ensures that Neandertal heritage is preserved responsibly and sustainably.

In conclusion, managing Neandertal heritage is a multidisciplinary effort that balances scientific inquiry, conservation, public education, and legal protection. By safeguarding these ancient sites, we enrich our understanding of human history and promote a global appreciation for our prehistoric roots.



Where it all began. Visit to the Neander valley.





# Guidelines for Best Practice in Neandertal Heritage Management

Managing Neandertal heritage presents unique challenges that require an interdisciplinary approach rooted in scientific rigor, ethical sensitivity, and public engagement. Neandertals, one of our closest hominin relatives, lived across large areas of Europe and Asia before their extinction approximately 40,000 years ago. As significant contributors to our understanding of human evolution, their archaeological and cultural sites hold enormous educational and historical value. By following these guidelines, heritage managers can protect Neandertal sites for future generations while offering the public meaningful, educational, and respectful experiences that enhance understanding of our shared past. This holistic approach ensures that Neandertal heritage is not only preserved but also valued as a critical piece of the human story, bridging the ancient past with contemporary society.

## 1. Scientific rigour

The foundation of Neandertal heritage management must be grounded in the latest scientific research. Neandertal sites and artifacts should be presented in ways that reflect ongoing discoveries in paleoanthropology, archaeology, and genetics. As new technologies, such as ancient DNA analysis or refined dating techniques, provide deeper insights into Neandertal life, their findings must be incorporated into the management strategies. It is crucial to avoid outdated stereotypes that depict Neandertals as brutish or primitive, ensuring that public and academic interpretations are accurate, nuanced, and reflect their cognitive sophistication.

## 2. Respectful and ethical treatment of human remains

Neandertals, as close relatives of modern humans, should be treated with the same respect and dignity afforded to human remains. When managing Neandertal burial sites or skeletal remains, best practices should mirror those of modern archaeology, where ethical considerations guide how remains are handled, displayed, or stored. Public displays of Neandertal remains, an important element of emotional experience which provides much deeper immersion into the subject, should be framed thoughtfully, with sensitivity to ethical concerns regarding their treatment and presentation.

## 3. Conservation of archaeological sites

Preserving Neandertal sites is vital for future research and public education. Best practices in conservation involve minimizing damage during excavation, using non-invasive techniques such as ground-penetrating radar, and implementing strict site management plans to protect fragile landscapes. Regular site monitoring and the establishment of



protected status for important Neandertal sites ensure that they are not endangered by natural erosion, vandalism, or urban development.

## 4. Sustainable tourism and visitor management

While tourism can provide valuable support for heritage sites, it can also lead to site degradation. Implementing visitor management strategies is crucial to balancing public access with preservation. Limiting the number of visitors at sensitive sites, enforcing strict guidelines for visitor behavior, and providing controlled access can mitigate the impact of tourism. Additionally, virtual tours and augmented reality experiences can offer immersive alternatives without compromising the physical integrity of the sites.

## 5. Public education and engagement

One of the key goals of heritage management is to educate the public about Neandertal history. Interpretive programs, guided tours, and educational materials should provide clear, engaging, and accessible information about Neandertal life, culture, and biology. Offering workshops, hands-on exhibits, and interactive learning experiences helps visitors, especially young learners, to engage more deeply with the subject matter. Additionally, public lectures and partnerships with schools and universities can broaden the educational outreach.

## 6. Humanizing Neandertals in interpretation

Neandertals were complex beings with cognitive abilities and cultural practices that often mirror early Homo sapiens. Presentations of Neandertal life should emphasize their intelligence, creativity, and adaptability. Showcasing their tool-making skills, use of fire, symbolic behaviors (such as possible burial practices), and even evidence of art or ornamentation helps to dismantle outdated stereotypes and allows the public to see Neandertals as sophisticated members of the human lineage.

## 7. Collaboration with multidisciplinary experts

Effective Neandertal heritage management involves collaboration between experts from various fields, including archaeology, anthropology, paleogenetics, and environmental sciences. This multidisciplinary approach allows for a holistic understanding of Neandertals' ecological adaptations, social structures, and evolutionary significance. Regular collaboration with scientists ensures that heritage managers are working with the most current data and interpretations, enhancing the accuracy and richness of the site presentations.

## 8. Authenticity in representation

Ensure that reconstructions of Neandertal life, including models, tools, and depictions of their physical appearance, are based on solid archaeological and anthropological evidence. Avoid speculative reconstructions that could mislead the public or perpetuate stereotypes.



### 9. Cultural heritage laws and site protection

Ensuring that Neandertal heritage sites are legally protected is crucial for their preservation. Strong cultural heritage laws are essential in preventing unauthorized excavations, looting, or commercial exploitation of important sites. Managers should work closely with national governments and international organizations such as UNESCO to establish protective status for significant Neandertal sites. Enforcement of these legal protections should be a priority to safeguard these irreplaceable cultural and scientific resources.

### 10. Long-term preservation strategies

Neandertal heritage management should include plans for the long-term preservation of both physical artifacts and digital records. Artifacts such as tools, bones, and other cultural materials must be stored in climate-controlled environments to prevent degradation. Additionally, creating high-quality digital archives (including 3D scans of sites and artifacts) ensures that the information remains accessible to future generations of researchers, even if the physical materials deteriorate over time.

### 11. Technology and innovation in interpretation

Innovative technology, such as virtual reality (VR), augmented reality (AR), and 3D printing, can revolutionize how Neandertal heritage is presented to the public. These tools can create immersive experiences that bring Neandertal life to visitors in an interactive way. For example, VR can recreate ancient habitats, while AR can overlay digital reconstructions of Neandertal environments onto the modern landscape. Technology also allows for global access to Neandertal heritage through virtual tours and online exhibits.

### 12. Combatting misinformation and stereotypes

Neandertal heritage management should actively combat outdated stereotypes and misinformation. For decades, Neandertals were portrayed in popular culture as primitive, unintelligent, and brutish, which contradicts modern scientific evidence. Public outreach programs, exhibitions, and media communications should emphasize the cognitive complexity and adaptive abilities of Neandertals. Correcting these misconceptions helps build a more accurate and respectful understanding of our evolutionary cousins.

### 13. Supporting ongoing research

Heritage management should support and facilitate ongoing scientific research. Providing researchers with access to Neandertal sites, collections, and archives enables the continued study of these ancient peoples. Funding and logistical support for interdisciplinary research programs are vital, as new scientific methods, such as paleogenomics, have dramatically reshaped our understanding of Neandertals in recent years. Collaboration with academic institutions and research organizations is essential for fostering new discoveries.



### 14. Sustainability in heritage management

Sustainable practices should guide every aspect of Neandertal heritage management. This includes reducing the environmental footprint of tourism, using eco-friendly materials in conservation efforts, and minimizing energy consumption in museum and site operations. Heritage managers should also consider the long-term sustainability of the sites themselves, ensuring that preservation practices are designed to protect against future challenges like climate change or environmental degradation.

### 15. Public participation and citizen science

Inviting public participation in Neandertal heritage management can create a stronger connection between people and the ancient past. Citizen science projects, where volunteers assist in research or conservation efforts, can provide valuable data while also fostering a sense of ownership and stewardship among the public. Involving local communities in heritage projects promotes a deeper appreciation of Neandertal history and creates a broader network of advocates for the preservation of these sites. Neandertal heritage management is a multifaceted endeavor that requires careful balancing between scientific research, ethical considerations, public education, and site preservation. By following these 15 best-practice guidelines, heritage managers can ensure that Neandertal sites and artifacts are preserved for future generations while fostering a deeper understanding of this crucial chapter in human history. Managing Neandertal heritage effectively involves a collaborative, interdisciplinary approach that integrates new technologies, fosters public engagement, and ensures sustainability. Ultimately, the goal is to protect and communicate the significance of Neandertal heritage in a way that respects the complexity of these ancient humans and their important place in the broader story of human evolution.



Public participation. A crucial step in heritage management



GUIDELINES FOR  
BEST PRACTICE IN  
VALORIZATION OF  
NEANDERTAL HERITAGE  
IN TOURISM



## Introduction: Valorization of archaeological heritage in tourism

Valorization of archaeological heritage refers to the process of enhancing the cultural, historical, and economic value of archaeological sites, making them accessible and engaging for contemporary society. In the context of tourism, it involves integrating archaeological sites and artifacts into the tourism economy while ensuring their protection, preservation, and sustainable use. The valorization of archaeological heritage not only promotes historical awareness and education but also fosters economic development, local identity, and cultural continuity.

The primary goal of valorizing archaeological heritage is to highlight its cultural and historical significance. Archaeological sites provide tangible links to the past, offering insights into ancient civilizations, technologies, and social structures. When these sites are integrated into tourism, they become powerful tools for education. Visitors can explore the material culture of ancient peoples, deepening their understanding of human history. Interpretation centers, museums, and guided tours are key in translating the academic and scientific knowledge derived from these sites into accessible narratives for the public. By promoting such understanding, valorization contributes to cultural continuity, fostering a sense of connection between the past and present. For example, famous archaeological sites such as the Roman ruins in Italy or the pyramids of Egypt have been carefully preserved and are visited by millions annually. These sites not only educate the public about ancient civilizations but also encourage respect for different cultures and histories. By showcasing the achievements of past societies, these sites also contribute to global cultural understanding and exchange. Valorizing archaeological heritage plays a crucial role in local and national economic development. Tourism is one of the largest and fastest-growing industries worldwide, and archaeological sites attract millions of tourists each year. By integrating heritage into tourism, archaeological sites become key economic assets. The revenue generated from entrance fees, guided tours, souvenirs, and nearby hospitality services can significantly boost local economies. In some regions, archaeological tourism is a major driver of economic growth, creating jobs and supporting local businesses.

The ancient city of Petra in Jordan is a prime example. As one of the most famous archaeological sites in the world, Petra attracts hundreds of thousands of visitors annually, contributing significantly to Jordan's tourism sector. This economic benefit extends to surrounding communities, where local residents find employment in hospitality, crafts, and as tour guides. However, managing the balance between preservation and commercialization is crucial to ensure that the site remains intact for future





generations. Sustainable management is at the core of the valorization process. While tourism brings economic benefits, it also poses risks to the preservation of archaeological sites. Over-tourism can lead to the physical degradation of fragile sites, erosion, pollution, and loss of authenticity. Therefore, a sustainable approach is essential, involving careful planning, visitor management, and conservation strategies. For instance, limiting the number of daily visitors, developing off-site visitor centers, and employing technology such as virtual reality (VR) can help alleviate the pressure on fragile sites. Investing in preservation efforts, such as reinforcing structures or implementing erosion control measures, ensures that sites are not only accessible but also maintained for future generations.

Valorizing archaeological heritage can also strengthen local identity and pride. For communities living near archaeological sites, these landmarks often represent the legacy of their ancestors. By promoting local history and culture, tourism centered on archaeological heritage fosters a sense of ownership and pride in preserving these sites. Communities that are actively involved in the management and interpretation of archaeological sites are more likely to support their preservation and develop sustainable practices that protect their heritage. The valorization of archaeological heritage in tourism presents both opportunities and challenges. By enhancing the cultural, historical, and economic value of archaeological sites, tourism can provide significant educational and economic benefits while promoting cultural continuity and local identity. However, careful management and sustainable practices are essential to mitigate the risks posed by increased tourism. When done effectively, the valorization of archaeological heritage can preserve the past while fostering a brighter future for both the sites themselves and the communities that depend on them.



## Icomos international charter for cultural heritage tourism:

Reinforcing cultural heritage protection and community resilience through responsible and sustainable tourism management  
Adopted by the ICOMOS Annual General Assembly (Bangkok, Thailand) in November 2022

### Preamble

Profound growth and disruption in global tourism, including cultural heritage tourism, has necessitated the revision of the ICOMOS International Charter for Cultural Tourism (1999). The process has resulted in this ICOMOS International Charter for Cultural Heritage Tourism (2021): Reinforcing cultural heritage protection and community resilience through responsible and sustainable tourism management (hereinafter “the Charter”), which complements and updates the previous one. In addition to recognizing the intensified tourism use of cultural heritage places and destinations, this Charter addresses increasing concerns about the degradation of cultural heritage along with social, ethical, cultural, environmental and economic rights issues associated with tourism.

In this Charter, cultural heritage tourism refers to all tourism activities in heritage places and destinations, including the diversity and interdependence of their tangible, intangible, cultural, natural, past and contemporary dimensions. This Charter recognizes heritage as a common resource, understanding that the governance and enjoyment of these commons are shared rights and responsibilities.

Participation in cultural life with access to cultural heritage is a human right. However, some evolved aspects of tourism have constituted fundamentally unsustainable uses of planetary resources, including cultural and natural heritage. This calls for a charter that advocates responsible and diversified cultural tourism development and management contributing to cultural heritage preservation; community empowerment, social resilience and wellbeing; and a healthy global environment.

Properly planned and responsibly managed cultural heritage tourism, involving participatory governance with diverse cultures, right-holders and stakeholders, can be a powerful vehicle for the preservation of cultural heritage and sustainable development. Responsible tourism promotes and creates cultural



heritage awareness, provides opportunities for personal and community well-being and resilience, and builds respect for the diversity of other cultures. It can therefore contribute to intercultural dialogue and cooperation, mutual understanding, and peace-building.

The objectives of this Charter are:

#### **Objective 1**

To place the protection of cultural heritage and community rights at the heart of cultural heritage tourism policy and projects, by providing principles that will inform responsible tourism planning and management for cultural heritage protection, community resilience and adaptation;

#### **Objective 2**

To promote stakeholder collaboration and participatory governance in the stewardship of cultural heritage and management of tourism, applying a people-centered and rights-based approach, emphasizing access, education and enjoyment;

#### **Objective 3**

To guide cultural heritage and tourism management in supporting the UN Sustainable Development Goals and Climate Action policy.

#### **Who is this Charter for?**

The responsible management of tourism is a shared responsibility of governments, tour operators, tourism businesses, destination managers and marketing organizations, site management authorities, land-use planners, heritage and tourism professionals, civil society and visitors. This Charter is relevant to all of the above as cultural heritage and tourism stakeholders. It provides guidance for heritage and tourism practitioners, professionals, and decision makers within international, national and local government agencies, organizations, institutions and administrations. It aims to be a reference for educators, academics, researchers and students engaged with cultural heritage and tourism. It applies to the management of all cultural heritage properties and to the entire spectrum of their protection, conservation, interpretation, presentation and dissemination activities, since all are connected with, and influenced by, public use and visitation.

The Charter aims to align the work of cultural heritage and tourism stakeholders in the pursuit of positive transformative change, offering principles for regenerative tourism destination management that is conscious of heritage values, as well as their vulnerability and potential. It seeks the fair, ethical and equitable distribution of tourism benefits to and within host



communities, contributing towards poverty alleviation. The Charter promotes the ethical governance of cultural heritage and tourism and calls for the integration of its principles into all aspects of cultural heritage tourism.

#### **The Principles of the Charter**

The principles set out below provide a framework for guidance on this subject that is not present in other documents concerning cultural heritage or tourism:

##### **Principle 1:**

Place cultural heritage protection and conservation at the centre of responsible cultural tourism planning and management;

##### **Principle 2:**

Manage tourism at cultural heritage places through management plans informed by monitoring, carrying capacity and other planning instruments;

##### **Principle 3:**

Enhance public awareness and visitor experience through sensitive interpretation and presentation of cultural heritage;

##### **Principle 4:**

Recognize and reinforce the rights of communities, Indigenous Peoples and traditional owners by including access and engagement in participatory governance of the cultural and natural heritage commons used in tourism;

##### **Principle 5:**

Raise awareness and reinforce cooperation for cultural heritage conservation among all stakeholders involved in tourism;

##### **Principle 6:**

Increase the resilience of communities and cultural heritage through capacity development, risk assessment, strategic planning and adaptive management;

##### **Principle 7:**

Integrate climate action and sustainability measures in the management of cultural tourism and cultural heritage.

Full text of the Charter:

[https://www.icomos.org/images/DOCUMENTS/Secretariat/2023/CSI/eng-franc\\_ICHTCharter.pdf](https://www.icomos.org/images/DOCUMENTS/Secretariat/2023/CSI/eng-franc_ICHTCharter.pdf)





# NEANDERTAL SITES AS TOURIST RESOURCES



## Neandertal sites as tourist resources

Neandertal sites, scattered across Europe and parts of Western Asia, represent a unique and invaluable aspect of human prehistory. As one of our closest extinct relatives, Neandertals have long fascinated both scientists and the general public. The preservation and presentation of Neandertal archaeological sites offer significant opportunities for tourism, education, and cultural heritage appreciation. These sites are not just remnants of a distant past but serve as important resources that can drive economic growth, foster scientific engagement, and enhance public understanding of human evolution. Neandertal sites are rich in archaeological and paleoanthropological findings that provide insights into early human life. Excavations have revealed everything from tools and weapons to evidence of hunting, shelter-building, and even symbolic behavior. For scientists, these sites are critical for studying Neandertal behavior, diet, and their interactions with early *Homo sapiens*. However, they also hold enormous potential as educational resources for the broader public. By developing interpretative centers, museums, and guided tours, Neandertal sites can serve as open-air classrooms where visitors can learn about human evolution. These experiences can be deeply enriching, providing a tangible connection to our ancient past. Sites like the Le Moustier cave in France, the Gibraltar caves, and the Shanidar Cave in Iraq have been transformed into tourist destinations that educate visitors on Neandertal culture and the broader context of Pleistocene environments. Engaging visitors with reconstructions, archaeological exhibits, and interactive technologies, such as virtual reality (VR), helps bring the distant past to life, fostering both public interest and scientific literacy. Tourism is a major global industry, and archaeological sites have always been an essential component of cultural tourism. Neandertal sites are no exception. Transforming these locations into tourist attractions can bring significant economic benefits to local communities and regions. For instance, popular sites such as the Neander Valley in Germany, where the first recognized Neandertal fossils were discovered, attract thousands of visitors annually, contributing to the local economy through entrance fees, guided tours, and the sale of related merchandise. Additionally, tourism based on Neandertal heritage promotes sustainable local development. Many Neandertal sites are located in rural or less economically developed regions, offering a chance for these areas to capitalize on their cultural heritage. Jobs are created in the form of tour guides, hospitality services, and conservation efforts, stimulating local economies while fostering a greater appreciation of the region's natural and cultural resources. While the tourism potential of Neandertal sites is considerable, it also presents challenges. Over-tourism can lead to the degradation of sensitive archaeological sites, threatening the preservation of invaluable artifacts and geological features. Sustainable





management practices are therefore essential to ensure that these sites are protected while remaining accessible to the public. Careful planning is required to balance tourism with conservation. For example, limiting visitor numbers, using non-invasive methods to protect the landscape, and implementing controlled access to the most fragile areas are important strategies. Additionally, digital technologies like virtual tours or augmented reality can offer immersive experiences for visitors without putting physical pressure on the sites themselves. This not only protects the integrity of the sites but also ensures that future generations can continue to learn from and enjoy these prehistoric resources.

Beyond their scientific and economic value, Neandertal sites contribute to the broader understanding of cultural heritage. They remind us of our shared human history and the diverse paths that human evolution has taken. Promoting these sites as tourist resources can encourage a sense of connection with our prehistoric ancestors and stimulate curiosity about the origins of human culture, technology, and adaptation. Public engagement through tourism also plays a critical role in preserving these sites for the future. When people feel connected to their heritage, they are more likely to support preservation efforts and advocate for the protection of archaeological resources. Neandertal sites, therefore, not only contribute to education and tourism but also foster a sense of responsibility for the stewardship of our collective past. Neandertal sites hold immense potential as tourist resources. They offer unique opportunities to engage the public in the study of human evolution, contribute to local economies, and promote cultural understanding. However, the development of these sites as tourist attractions must be done with care, ensuring that preservation and sustainability remain at the forefront. By balancing tourism with responsible conservation, Neandertal heritage can continue to educate, inspire, and contribute to the shared story of humanity for generations to come.



Museums and interpretative centers near the archaeological site help in its long-term preservation





# Guidelines for Best Practice in Valorization of Neandertal Heritage in Tourism

Neandertals, our closest extinct relatives, have long fascinated both scientists and the general public. Over the last few decades, research has profoundly shifted our understanding of Neandertals from crude, brutish stereotypes to sophisticated, adaptable humans who thrived for hundreds of thousands of years in Europe and Asia. Given their deep relevance to human evolution, Neandertal sites represent a unique opportunity for tourism centered on prehistoric heritage. However, turning Neandertal sites into tourist destinations requires careful consideration to ensure that their scientific, cultural, and ethical values are preserved while also creating a meaningful and engaging visitor experience. This essay outlines 15 key guidelines for best practice in the valorization of Neandertal heritage in tourism.

## 1. Scientific accuracy in interpretation

The foundation of any heritage tourism initiative involving Neandertals must be a commitment to scientific accuracy. Archaeological sites and interpretative materials should reflect the latest findings in paleoanthropology, archaeology, and genetics. Misrepresentation of Neandertal life risks perpetuating outdated myths, such as the belief that Neandertals were primitive and incapable of complex thought. As research continually evolves, site managers and curators should be prepared to update exhibitions and educational materials regularly.

## 2. Presenting Neandertals as complex human beings

Neandertals were intelligent, adaptable, and culturally rich humans. Valorization efforts should emphasize their sophisticated tool-making skills, hunting strategies, symbolic behavior, and even potential forms of art. By presenting Neandertals as fully human, rather than evolutionary dead-ends, tourism initiatives can foster empathy and a deeper connection between visitors and their prehistoric ancestors. Such an approach humanizes Neandertals, offering a more inclusive understanding of human evolution.

## 3. Engaging narratives and storytelling

To capture the attention of a diverse audience, the interpretation of Neandertal heritage should rely on compelling narratives. Rather than focusing solely on facts, it is important to tell the stories of Neandertals' everyday lives, their interactions with *Homo sapiens*, their survival strategies during the Ice Age, and their eventual extinction. Storytelling connects visitors emotionally to the subject matter, making the history of Neandertals more relatable and engaging.



© Krapina Neanderthal Museum





#### 4. Interactive and immersive experiences

Tourism today increasingly demands interactive and immersive experiences. For Neandertal sites, this can involve using technologies like augmented reality (AR) or virtual reality (VR) to bring the past to life. For instance, visitors could use AR devices to visualize how Neandertals lived in a reconstructed camp or cave. These experiences can deepen understanding by allowing visitors to engage with archaeological findings in a hands-on, dynamic way.

#### 5. Preservation of authenticity and integrity of sites

One of the biggest challenges in valorizing archaeological heritage for tourism is balancing accessibility with preservation. Neandertal sites, many of which are sensitive to environmental change and human activity, must be preserved for future generations. Tourism development should not compromise the integrity of the site. Limiting visitor numbers, employing non-invasive archaeological techniques, and ensuring that infrastructure development is sustainable are critical strategies for protecting these invaluable cultural resources.

#### 6. Education and public awareness

An essential component of valorizing Neandertal heritage is educating the public about their significance in human history. Informative displays, workshops, lectures, and guided tours should be an integral part of any tourism initiative. Engaging educational programs targeting different age groups – children, students, and adults – can promote scientific literacy and increase appreciation for the importance of preserving Neandertal sites.

#### 7. Collaboration with scientists and researchers

Close collaboration between tourism operators, site managers, and scientific researchers ensures that Neandertal sites are presented accurately and responsibly. By maintaining a dialogue with the scientific community, tourism ventures can provide visitors with insights into the latest discoveries, making the experience more relevant and dynamic. Researchers, on the other hand, can benefit from increased public interest and awareness, potentially leading to more support for their work.

#### 8. Respecting ethical considerations

The display of human remains, including those of Neandertals, requires careful ethical consideration. These remains are not simply objects but represent individuals who lived tens of thousands of years ago. Sites and museums should be transparent about the ethical decisions surrounding the display of Neandertal skeletons, ensuring that remains are treated with dignity and respect. Displaying remains should aim to educate, not sensationalize, the lives of Neandertals.



Even when the site is no longer preserved, it is important to appropriately commemorate it



### 9. Local community involvement

Incorporating the local community into the management and promotion of Neandertal heritage sites is crucial for sustainable tourism. Local residents often have a personal or cultural connection to these sites and can provide valuable insights and perspectives. Tourism initiatives should seek to involve local communities in ways that provide economic opportunities – such as employment as tour guides or in hospitality – while also fostering pride in the region’s unique archaeological heritage.

### 10. Sustainable economic development

Neandertal heritage tourism has the potential to bring significant economic benefits to local communities, especially in rural areas where many of these sites are located. However, this must be managed sustainably. Over-reliance on tourism can lead to environmental degradation and economic vulnerability if visitor numbers decline. Diversifying the local economy by developing related industries, such as artisanal crafts, cultural events, or culinary tourism, can help create a more resilient economy that supports the heritage site without overwhelming it.

### 11. Multidisciplinary interpretations

The presentation of Neandertal sites should draw on multiple disciplines to create a holistic understanding of their lives. Archaeology, anthropology, paleoecology, and even art history can provide insights into different aspects of Neandertal life, from their diets and hunting techniques to their symbolic and creative activities. Presenting a multidisciplinary narrative ensures that visitors gain a well-rounded understanding of Neandertal culture, behavior, and environment.

### 12. Promoting accessibility for all

Neandertal sites should be accessible to all, including individuals with disabilities. This can be achieved by providing wheelchair-friendly paths, audio guides for the visually impaired, and sign language interpreters for the hearing-impaired. Ensuring that everyone, regardless of physical ability, can access these heritage sites promotes inclusivity and allows a broader audience to engage with the history of human evolution.

### 13. Virtual and digital accessibility

In addition to physical accessibility, digital accessibility is becoming increasingly important in the valorization of heritage sites. Websites, virtual tours, and mobile applications can bring Neandertal sites to a global audience, allowing people who are unable to visit in person to explore and learn about these remarkable places. This also serves as a valuable educational resource for schools and universities, extending the reach of Neandertal heritage beyond its geographic confines.



### 14. Preserving Neandertal art and symbolism

Recent research suggests that Neandertals engaged in symbolic behaviors, possibly creating art and using pigments for decoration. Highlighting these aspects of Neandertal culture in tourism initiatives can challenge stereotypes and foster a greater appreciation for their cognitive and creative capacities. Displaying evidence of Neandertal art and symbolism in museums, visitor centers, or through digital platforms can offer a more nuanced understanding of their intellectual life and connection to Homo sapiens.

### 15. Fostering international collaboration

Neandertal sites are distributed across many countries, and their heritage transcends national borders. International collaboration is essential for sharing knowledge, resources, and best practices in both scientific research and tourism management. Collaborative efforts between countries can help preserve sites, standardize ethical practices, and promote responsible tourism that respects the global significance of Neandertal heritage. Furthermore, international cooperation can foster a shared sense of responsibility for the stewardship of these prehistoric resources.

Valorizing Neandertal heritage through tourism presents an exciting opportunity to engage the public with one of the most fascinating chapters in human history. However, it requires a thoughtful, responsible approach that balances economic development with preservation and education. By adhering to the 15 guidelines outlined in this essay, tourism initiatives can promote scientific literacy, foster empathy for our ancient ancestors, and ensure that Neandertal heritage sites are protected for future generations. In doing so, we not only enhance our understanding of the past but also strengthen our connection to the broader story of human evolution.











