



Class 7

THE PALEOLITHIC AGE

Title:

Class 7: The Paleolithic Age

Topics (CHAPTERS – Video lectures):

Class 7 [Introduction Video](#)

Chapter 1 Video. [Hall of the Cradle of Humankind - Kenya National Museum](#)

Chapter 2 Video. [Olorgesailie Prehistoric Site](#)

Subject/Course: Civics, History, Geography, Religion, Ethics, Social Studies

Grade: Secondary School Level

The Ages of Globalization book reference chapters:

- ▶ Chapter 2. Paleolithic Age

Download your free copy of the AOG book [here](#).

Stage 1 – Desired Results



In this section, you will find a detailed framework that outlines the overall learning goals, the enduring understandings, attitudes and values students will develop, essential questions students should be able to formulate and/or to provoke deep thinking and discussion, and specific learning outcomes that emphasize both knowledge and skills.

Established Goals:

Summary/Overarching:

Learners will recognize the Paleolithic Age as a foundational period that shaped the course of human history. They will understand humanity's common origin in Africa, tracing how early humans spread across the globe, adapting to various environments and climates, and carrying innovations as they migrated. During the Paleolithic Age, humans developed the first cultures, created languages, formed communities, began manipulating natural resources, engaged in hunting,

invented tools, and explored artistic expression. This era marks the beginnings of cultural and technological advancement that set the stage for future human development.

Enduring Understandings:

Students will understand that...

- ▶ Humanity shares a common origin and interconnected history.
- ▶ Their region is part of a larger narrative of human migration and cultural development, highlighting its place within the broader story of human history.

Essential Questions:

- ▶ What are the various factors humans have adapted to in the course of the great migration out of Africa?
- ▶ What were key inventions of the Paleolithic Age?
- ▶ What insights can we gain from the Paleolithic Age,



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- ▶ particularly about the social organization and structure of early human societies?

Students will know...

- ▶ The pre-history of Homo Sapiens.
- ▶ The emergence of anatomically modern Homo Sapiens.
- ▶ The core inventions of modern Homo Sapiens: language, culture, community (band) challenges due to climate change.

- ▶ The emergence from Africa.
- ▶ The settlement around the world and technologies.
- ▶ The transition from the Paleolithic to the Neolithic Age.

Students will be able to...

- ▶ Trace the history of the human race and its origins.
- ▶ Identify the inventions of the Paleolithic Age and reflect on the inventions and migrations of their respective cultures and lineage.

Stage 2 – Assessment Evidence



In this section, you'll find key concepts and definitions essential for understanding the course material as well as activities, such as Vocabulary Flashcards, Check-Your-Facts and Fill-in-the-Blank to enhance your students' comprehension and retention. You can adapt these activities to suit various subjects and grade levels.

Concepts & Definition

Familiarize yourself with the provided terms, such as "Holocene," "Homo Genus" and others. Understanding these definitions will help you effectively teach the material and connect it to your lessons.

Vocabulary Activity

Create physical flashcards for each term. This hands-on approach helps reinforce terminology and aids in building a solid foundation of knowledge. Encourage students to use these flashcards for review and practice.

- ▶ **UNESCO's World Heritage Sites:** are designated places on Earth that are of outstanding universal value to humanity and as such, have been inscribed on the World Heritage List to be protected for future generations to appreciate and enjoy ([UNESCO](#)).
- ▶ **Holocene:** is the most recent segment of the [Quaternary Period](#), spanning the last 11,700 years of

[Earth's](#) history. This [epoch](#) is distinctive not only for its extensive geological record – covering the largest area of any epoch in both continental and marine sediments – but also because it coincides with the late and post-Stone Age development of [human](#) civilization. The impact of human activity on the planet during the Holocene has been so significant that it warrants recognition as a unique period in geological time (Britannica).

- ▶ **Homo genus:** Homo, [genus](#) of the family [Hominidae](#) (order [Primates](#)) characterized by a relatively large cranial capacity, limb structure adapted to a habitual erect posture and a bipedal gait, well-developed and fully opposable [thumbs](#), hands capable of power and precision grips, and the ability to make standardized precision [tools](#), using one tool to make another. Together with modern [humans](#), [Homo sapiens](#), the genus includes the extinct [species](#) [H. habilis](#), [H. erectus](#), and [H. heidelbergensis](#) as well as the [Neanderthals](#) ([H. neanderthalensis](#)), the early form of [Homo sapiens](#) called [Cro-Magnon](#), and the [enigmatic](#) [Homo naledi](#). A mandible discovered at the Ledi-Geraru research site in [Ethiopia's Awash River](#) valley in early 2013 serves as the oldest [fossil](#) specimen attributed to the genus. Dated to 2.8 million–2.75 million years ago, it possesses some of the primitive traits that occur in [Australopithecus](#) while also containing derived features (such as smaller [teeth](#) and a reduced chin) associated with later species of Homo (Britannica).



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- ▶ **Homo erectus:** was an ancient hominin that roamed the Earth already 2 million years ago. “Early African Homo erectus fossils (sometimes called Homo ergaster) are the oldest known early humans to have possessed modern human-like body proportions with relatively elongated legs and shorter arms compared to the size of the torso” (Smithsonian National Museum of Natural History).
- ▶ **Homo habilis:** is the homo genus with ability. It was a tool making hominin that is essentially an ancestor of modern Homo sapiens.
- ▶ **Homo sapiens:** is the species that living human beings on this planet belong to. During a time of dramatic climate change 300,000 years ago, Homo sapiens evolved in Africa. Like other early humans that were living at this time, they gathered and hunted food, and evolved behaviors that helped them respond to the challenges of survival in unstable environments ([Smithsonian National Museum of Natural History](#)).
- ▶ **Ice Age:** is any geologic period during which thick ice sheets cover [vast](#) areas of land. Such periods of large-scale [glaciation](#) may last several million years and dramatically reshape surface features of entire continents. A number of major ice ages have occurred throughout [Earth's history](#). The earliest known took place during [Precambrian time](#) dating back more than 570 million years. The most recent periods of widespread glaciation occurred during the [Pleistocene Epoch](#) (2.6 million to 11,700 years ago) (Britannica).
- ▶ **Pleistocene:** is best known as a time during which extensive [ice](#) sheets and other [glaciers](#) formed repeatedly on the landmasses and has been informally referred to as the “Great Ice Age.” The timing of the onset of this cold interval, and thus the formal beginning of the Pleistocene Epoch, was a matter of substantial debate among geologists during the late 20th and early 21st centuries. By 1985 a number geological societies agreed to set the beginning of the Pleistocene Epoch about 1,800,000 years ago, a figure coincident with the onset of glaciation in [Europe](#) and [North America](#). Modern research, however, has shown that large [glaciers](#) had formed in other parts of the world earlier than 1,800,000 years ago. This fact precipitated a debate among geologists over the formal start of the Pleistocene, as well as the status of the Quaternary Period, that was not resolved until 2009 (Britannica).
- ▶ **Stone tools:** The ability to create and construct sophisticated [tools](#) was thought to have been limited to members of Homo exclusively, with H. habilis being the first to develop the stone-hewn [pebble chopper](#) some 2.6 million years ago. One study published in 2015, however, described the discovery of [primitive](#) tools in [rock strata](#) near [Lake Turkana](#) in [Kenya](#) dating back some 3.3 million years, offering strong evidence that toolmaking predated the emergence of Homo (Britannica).
- ▶ **Olorgesailie Prehistoric Site:** is located on the floor of the Great Rift Valley between two extinct volcanoes, Mt. Olorgesailie and Oldonyo Esakut to the south-west of Nairobi, Kenya. Olorgesailie area is in a lake basin that existed during the latter part of the middle Pleistocene period, probably between 200,000 and 100,000 years ago. Discovered by Louis and Mary Leakey in the 1940s, Olorgesailie was excavated by Glynn Isaac as his dissertation research during the 1960s. Olorgesailie has important evidence that concerns the habits and activities of early prehistoric peoples of the hand axe culture. The site has the highest concentration of hand axes probably compared to any other place in the world. Olorgesailie has excellently preserved biological and cultural evidence about the evolution of man ([UNESCO](#)).
- ▶ **Hominini** (Smithsonian Magazine):
 - **Family:** Hominidae (modern humans and our close extinct relatives, such as Ardipithecus and Australopithecus) Genus: Homo Species: sapiens. Under this system, the term hominid refers to members of the Hominidae family (in taxonomy, names that end in [-idae refer to a family](#)). But in the past few decades, the definition of Hominidae has been broadened to include orangutans, gorillas and chimpanzees because of the recognition that these apes are very closely related to humans. In the past, they had their own family – Pongidae – based on the physical characteristics that seemed to unite the great apes as a group. Genetic analyses, however, indicated that gorillas and chimpanzees are actually more closely related to humans than they are to orangutans. Therefore, the Pongidae family didn't make sense (in technical terms, it was [paraphyletic](#)). The genetic discoveries led to a new



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classification of humans, starting at the family level.

- **Family:** Hominidae (orangutans, gorillas, chimpanzees and humans) Subfamily: Homininae (gorillas, chimpanzees and humans) Tribe: Hominini (humans and our close extinct relatives; the group that was called Hominidae in the previous classification) Genus: Homo Species: sapiens. Here, the term hominin refers to the tribe Hominini. That's why many of our extinct ancestors are now called hominins. But it's not technically wrong to call them hominids—all members of Hominini are also members of the subfamily Homininae and the family Hominidae, that's how the nesting system works. It's just a less precise term.

- ▶ **Neanderthal:** (*Homo neanderthalensis*, *Homo sapiens neanderthalensis*) is member of a group of [archaic humans](#) who emerged at least 200,000 years ago during the [Pleistocene Epoch](#) (about 2.6 million to 11,700 years ago) and were replaced or [assimilated](#) by early modern [human](#) populations (*Homo sapiens*) between 35,000 and perhaps 24,000 years ago (Britannica).

- ▶ **Universal Grammar:** is a theory suggesting that humans are born with [innate](#) faculties that facilitate [language](#) acquisition. The concept has evolved significantly since it was first proposed, particularly since the 1940s when it became a central focus of modern linguistic research. [Noam Chomsky](#), a leading figure in modern development of the idea of universal grammar, identifies [precursors](#) in the writings of Panini, [Plato](#), and both rationalist and [romantic](#) philosophers. Chomsky emphasizes the contributions of the 17th-century Port Royal grammarians, who applied a rationalist perspective to language and universals, arguing that people in the "civilized world" share a common structure of thought. Moreover, he traces the [conception](#) of linguistic structure that marked the origins of modern syntactic theory to Lancelot and Arnauld's 1660 Port Royal work, *Grammaire générale et raisonnée*, which postulated a link between the natural order of thought and the ordering of words (Britannica).

Check-Your-Facts / Review Questions

Utilize this activity to promote critical thinking by having students verify and analyze information related to the concepts and definitions.

1. What characterizes the ways in which early modern humans lived during the Paleolithic Age? (Hunting and gathering)
2. What were the crucial technologies of hunters and gatherers in the Paleolithic Age? (The control of fire and knowledge of edible plants)
3. What were the inventions during the Paleolithic Age? (invention of language, formation of clans, manipulation of nature - such as hunting, advanced toolmaking, and the invention of arts)

Fill-In-The-Blank

Incorporate this activity to assess students' understanding of key concepts and historical periods. Provide a word bank to support their learning and check their grasp of the material.

1. The Paleolithic Age ranged from **(70,000 B.C.)** to **(10,000 B.C.)** and is the era of (hunter-gatherers) and the dispersal from the continent of (Africa).
2. The evolutionary advance of the genus *Homo* that involves a massive increase in brain capacity - notably in the frontal cortex used for cognition - is called **(encephalization)**.
3. Evolutionary biologist E.O. Wilson terms the fundamental characteristics of human nature including our capacity to cooperate **(eusociality)** within groups.
4. Human **(cooperation)**, **(large brain size)**, more meat consumption and campsite-based hunting societies coevolved to shape our distinctive human nature.
5. Early societies were **(egalitarian)** rather than hierarchical.
6. It is not necessarily inherent to humans to live harmoniously and sustainably with nature: even hunter-gatherers were capable of massive (environmental) upheavals, driving large land animals to **(extinction)** in Oceania around 50,000 years ago



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and the Americas around 10,000 years ago.

7. Humans are also thought to have driven **(Neanderthals)** to extinction, either through direct conquest, or competitive exclusion - beating Neanderthals to scarce resources of food and shelter.

Stage 3 – Learning Activities



In this section, you will find the different learning activities associated with this specific Class. We recommend that you begin by watching the lecture videos as a basis for the course and as a primary element for the course content. Interactive reference maps are mentioned in the lectures and activities.

Lecture Videos

Class 7 [Introduction Video](#)

Chapter 1 Video. [Hall of the Cradle of Humankind - Kenya National Museum](#)

Chapter 2 Video. [Olorgesailie Prehistoric Site](#)

Reference Maps

<https://sdgstoday-sdsn.hub.arcgis.com/pages/ages-of-globalization-data>

Human Dispersal in the Paleolithic Period

Timeline

6 million years ago: Homo sapiens evolutionary origins

4 million years ago: Human genus Homo emerged

2 million years ago: First great dispersal of hominins from Africa

Chapter Summaries



In this section, you can find a summary of each Chapter in this Class for your reference. Chapter summaries provide insight into the era discussed in each class period. Should you have issues watching the videos, e.g. due to internet bandwidth, the summaries provide some of the key insight you can build on.

Video Lectures Summary

- ▶ **Origins and Early Development:** Homo sapiens trace their lineage to African great apes approximately 6 million years ago. The Homo genus emerged around 4 million years ago, characterized by bipedalism, which was a pivotal shift in human evolution. The first hominins dispersed from Africa roughly 2 million years

ago, leading to the evolution of pre-modern Homo species, such as Neanderthals, in Asia and Europe. Stone tools found across these regions mark early technological innovation.

- ▶ **Brain Development:** Encephalization resulted in a substantial increase in brain capacity, fostering advanced cognitive abilities in hominins. Anatomically modern humans appeared in Africa about 200,000 years ago, displaying complex behaviors such as group cooperation and defensive aggression toward out-groups.
- ▶ **Social Structure and Behavioral Evolution:** Paleolithic humans organized into small, foraging bands that frequently shifted base camps. Behavioral traits such



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as language likely evolved to enhance group defense. Human social structures emphasized cooperation within groups, supported by increasing brain size and a reliance on campsite-based living.

- ▶ **Migration and Dispersal:** Homo sapiens likely began migrating out of Africa around 180,000 years ago, though many groups did not survive. The major dispersal, known as the Great Migration, began approximately 50,000 to 70,000 years ago. This migration brought humans to the Near East (50–60 kya), Europe and Australasia (45 kya), and the Americas (around 15 kya). Debate continues regarding the exact nature of these dispersal events and encounters with other hominins, including Neanderthals and Denisovans.
- ▶ **Ecological Impact and Interactions with Other Species:** As Homo sapiens spread to new regions, their arrival often coincided with megafauna extinctions, likely due to a combination of overhunting and climate change. In Australia, for example, the extinction of large animals may be linked to human hunting and environmental shifts. Similarly, the arrival of foraging societies in the Americas contributed to animal extinctions. The entry of Europeans into the Americas later had devastating consequences for Native populations. Interbreeding with other hominin species

led to genetic exchanges, with modern humans inheriting DNA from Neanderthals and Denisovans.

- ▶ **Cultural and Technological Advances in the Upper Pleistocene:** This period saw rapid cultural developments, including the emergence of art, language, and permanent settlements. Humanity achieved “modernity,” which led to denser populations and cultural flourishing. Language became a vital “technological” breakthrough, facilitating complex social interactions and migrations, including to North America. Upper Paleolithic societies were generally egalitarian, with leadership positions attained through persuasion rather than force.
- ▶ **Cooperation and Conflict:** In-group cooperation was essential, but violence toward out-groups was common in territorial defense. The Paleolithic Age provides a nuanced view of early human life, cautioning against romanticized notions of harmony with nature.
- ▶ **Lessons for Modern Society:** Insights from the Paleolithic era highlight the need for intentional strategies to achieve environmental sustainability and peace across cultures. Building a sustainable and peaceful society requires rational planning and proactive measures rather than reliance solely on innate human tendencies.

Activities



In this section, you can find a range of interactive activities involving graphics, community engagement and a capstone project, designed to engage students in exploring geographic, historical, and environmental concepts. These activities foster critical thinking and help students connect personal and community experiences with larger global patterns, encouraging them to take positive action in their schools and communities. You can use these activities in their entirety or select certain sub-sections, use them as in-class activities or assign them as homework or both, providing you with additional materials to help students showcase their understanding of the desired learning outcomes. For the maps, you can work with [ArcGIS](#) to develop these maps or you can use your own maps.

Graphics Activities (Map, Data, Diagrams)

In-Class Activity on Human Dispersal & Migration Stories (40 minutes)

Map Analysis and Class Discussion (10 minutes)

- ▶ Objective: Begin by examining a map of [Human Dispersal](#) during the Paleolithic Age as a class. Discuss the significance of migration and how it shaped human history.
- ▶ Questions to Guide Discussion:
 - What patterns of migration do you see?
 - How do you think migration impacted human culture, technology, and adaptation?



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Migration Storytelling Circle (20 minutes)

- ▶ Objective: Introduce students to the concept of migration stories and how their own family histories might be part of a broader migration narrative.
- ▶ Activity: In small groups, each student shares one detail or story they already know about their family's or community's migration history.
- ▶ Prompting Questions:
 - What do you know about why your ancestors moved?
 - Have you noticed traditions in your family or community that connect to different regions or cultures?

Introduction to the Homework Assignment (10 minutes)

Explain the homework activity below, including guidance on questions and tools students can use.

Homework Assignment: Family & Community Migration Stories

Family Storytelling Session (45–60 minutes)

- ▶ Objective: Conduct a storytelling session with family members or community elders. Ask questions like:
 - What brought your ancestors to their new location?
 - How has migration shaped your family's traditions and culture?
 - What challenges did they face along the way?

Mapping Migration Routes (20 minutes)

- ▶ Objective: Create a map of your family's migration path.
- ▶ Instructions:
 - Use a world map (physical or digital) to trace the journey from your family's place of origin to your current home.
 - Sketch Layer: Draw a line from the original location to where your family settled.
 - Distance Measure: Calculate the approximate distance traveled, reflecting on the journey and its significance.

Journal Reflection (15–20 minutes)

- ▶ Objective: Invite students to reflect on what they learned in a short journal entry. Choose from prompts like:
 - How has learning about your family's migration journey affected your understanding of your heritage?
 - What was a surprising or meaningful part of the storytelling session?
 - How does migration appear to have influenced the cultural identity of your family or town?

Follow-Up In-Class Activity (40 minutes)

Community Migration Stories Project (20 minutes)

- ▶ Objective: In groups, students share their migration maps and journal reflections.
- ▶ Discussion Points:
 - What common themes did you find across different migration stories?
 - How did each family or community adapt to their new environment?

Student Action Project Brainstorm (20 minutes)

- ▶ Objective: Brainstorm ideas for a community or school project to share these stories with a wider audience.
- ▶ Ideas Include:
 - Creating a community mural or map that visualizes different migration paths.
 - Starting a blog or digital story map to showcase migration stories.
 - Recording a podcast or video series with community members discussing their heritage and migration journeys.



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Readings

UNESCO World Heritage Convention on Olorgesailie

Prehistoric Site: Olorgesailie Prehistoric Site is located on the floor of the Great Rift Valley between two extinct volcanoes, Mt. Olorgesailie and Oldonyo Esakut to the south-west of Nairobi, Kenya. Olorgesailie area is in a lake basin that existed during the latter part of the middle Pleistocene period, probably between 200,000 and 100,000 years ago. Discovered by Louis and Mary Leakey in the 1940s, Olorgesailie was excavated by Glynn Isaac as his dissertation research during the 1960s. Olorgesailie has important evidence that concerns the habits and activities of early prehistoric peoples of the hand axe culture. The site has the highest concentration of hand axes probably compared to any other place in the world. Olorgesailie has excellently preserved biological and cultural evidence about the evolution of man. (UNESCO) More at: <https://whc.unesco.org/en/tentativelists/6665/>

Darwin, Charles, 1809-1882. *The Descent of Man*. New York: American Home Library, 1902.

<https://hdl.handle.net/2027/hvd.hw39w1>

- ▶ Part One. The Descent or Origin of Man. Chapter 1. The Evidence of the Descent of Man from Some Lower Form #27 (p.21-22)
- ▶ Natural Selection #78 (p.72-90)
- ▶ Chapter 3. Comparison of the Mental Powers of Man and the Lower Animals #100 (p.94)

*Wiggins, G., & McTighe, J. (2005) *Understanding by design* (2nd ed. Alexandria, VA: Association for Supervision and Curriculum Development ASCD