NO PREP

Battlefield Archaeology

Uncovering the Cost of War

Includes: Student reading, case study, differentiated questions, teacher key

Name: Period: Date:

Battlefield Archaeology: Uncovering the Cost of War

More Than Weapons: What Battlefields Actually Contain

The popular image of battlefield archaeology is metal detectorists finding musket balls and sword hilts. The reality is considerably more complex — and more important. Battlefields are archaeological sites like any other, containing the full range of evidence that any site might preserve: soil disturbance patterns, buried features, organic material, human remains, and the spatial distribution of objects across a landscape. What makes battlefield sites unique is their sudden, violent creation — everything in the archaeological record was deposited within a narrow window of time, often a single day, making them invaluable for understanding a specific historical moment in extraordinary detail. Battlefield archaeologists study not just the weapons but the human cost of conflict. Human skeletal remains on battlefield sites can tell researchers how soldiers

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Waterloo: Napoleon's Defeat Mapped in Metal

The Battle of Waterloo, fought on June 18, 1815, in what is now Belgium, ended Napoleon's rule and shaped European history for the next century. It also generated one of the most intensively studied battlefield archaeological landscapes in the world. Archaeological surveys beginning in the 1990s and accelerating in the 2000s used metal detectors, GPS mapping, and soil analysis to build an extraordinarily

detailed picture of how the battle unfolded, far more nuanced than the historical accounts of officers who survived it. One of the most striking findings from Waterloo archaeology was the near-total absence of human skeletal remains on the battlefield. Historical accounts suggest that approximately 47,000 soldiers were killed, wounded, or went missing at Waterloo in a single day. The archaeology accounts for almost none of the dead. Excavations and historical research eventually revealed why: the battlefield was systematically stripped of bones in the years following the battle, with remains ground up and sold as fertilizer. This 'bone trade' was not unique to Waterloo. Many 19th-century European battlefields were commercially stripped of human remains within years of the fighting. The archaeology of absence can be as revealing as the archaeology of presence.

WWI Trenches: Archaeology of the Western Front

The Western Front of World War One, the network of trenches stretching from the English Channel to the Swiss border, is one of the most archaeologically rich landscapes in the world. Decades of excavation have revealed the extraordinary complexity of trench systems: not just simple ditches but elaborate underground networks with sleeping quarters, command posts, medical stations, and even recreational spaces. The artifacts recovered from these sites form a vivid material record of daily life under the most extreme conditions: personal photographs, letters, playing cards, modified weapons, food containers, religious objects, and human remains. Human remains are recovered regularly from Western Front excavations, often during construction work in Belgium and France. The In Flanders Fields Museum in Ypres maintains a database of unidentified remains found in the region. Identification of these individuals is a complex, multi-step process: isotope analysis to determine geographic origin, DNA extraction and comparison to living relatives or reference databases, and sometimes dental record matching when military records survive. The British, French, Belgian, German, and Australian governments all maintain programs for identifying and repatriating remains, and successful identifications, even a century after the war ended, still make international news.

Bringing Soldiers Home: DNA and Remains Identification

The use of DNA to identify war dead has transformed the process of accounting for missing soldiers from conflicts of the 20th century. In the United States, the

Defense POW/MIA Accounting Agency (DPAA) uses DNA, dental records, isotope analysis, and circumstantial evidence to identify the remains of American service members missing from conflicts ranging from World War Two to the Vietnam War. As of 2024, the agency had identified over 1,000 previously missing individuals — a number that grows every year as laboratory techniques improve and family reference samples accumulate in databases. The identification of war dead is not purely a scientific exercise — it carries enormous emotional and cultural weight. For families who have waited decades without knowing the fate of a father, son, or husband, a positive identification can provide closure that nothing else can. Military traditions around the world place extraordinary symbolic importance on accounting for the dead: the Tomb of the Unknown Soldier in Arlington National Cemetery exists specifically because the United States could not identify some of its fallen. When DNA closes that gap — when the Unknown becomes known — it collapses the distance between a historical event and a living family, with results that can be deeply moving for everyone involved.

Key Information: Battlefield Archaeology

Topic	Details
Battlefield archaeology focus	Spatial distribution of objects, human remains, soil features — not just weapons
Waterloo (1815)	Extensive metal detector surveys; few human remains found due to 19th-century bone trade for fertilizer
Western Front (WWI)	Complex trench networks; remains recovered regularly during construction; multinational ID programs
DPAA (U.S.)	Defense POW/MIA Accounting Agency; uses DNA, dental records, isotopes to ID missing war dead
Identification methods	Isotope analysis (origin), DNA (family match), dental records, circumstantial evidence
MIA designation	Missing In Action — soldiers whose deaths were unconfirmed and remains not recovered

Topic	Details
Emotional significance	Identification provides closure to families; collapses decades of uncertainty into a personal answer
Ethics of excavation	War graves are simultaneously archaeological sites and resting places deserving respectful treatment

Case Study: Private Holt Comes Home

The three skeletons were found in the second week of excavation, buried together beneath a collapsed section of German trench line near Passchendaele, Belgium. They wore British uniform fragments. No dog tags were present — those were often removed or lost in the chaos of trench warfare. The team lead, Dr. Marta Janssen, photographed every bone in situ before anything was moved. The soil around the remains was screened for small artifacts. A brass button. A fragment of webbing. And then, in the soil near the chest of the middle skeleton, a small metal dental bridge — the kind of custom prosthetic work that military dentists sometimes recorded in service files. It took four months. The dental record match came from the Lancashire Fusiliers regimental archive, still held in a library in Bury. The record belonged to Private William Holt, reported Missing In Action on October 9, 1917 — the third day of the Battle of Passchendaele. DNA confirmation came six weeks later, from a reference sample provided by William's great-granddaughter, Margaret, now eighty-two years old and living in Preston. Dr. Janssen calls the British Army's casualty notification office to begin the formal process. She thinks about the woman in Preston who has carried this absence her whole life. She thinks about October 9, 1917, when William Holt was twenty-three years old and the ground collapsed on him in the dark. Some distances, she thinks, archaeology can actually close.

1. Using the reading passage, explain what scientific methods were used — or could be used — to identify Private Holt, and why multiple methods are typically needed rather than relying on a single technique.

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2. The reading argues that identifying and returning soldiers' remains matters even 100 years after a war. Using both the case study and the reading passage, explain why this matters — both for families and for broader historical understanding.

Multiple Choice

1. What was the surprising finding about human skeletal remains at the Waterloo battlefield site?

a) The remains showed evidence of chemical weapons not documented in historical accounts

b) The remains were so well-preserved that individual soldiers could be identified

c) Very few remains were found because bones had been stripped and sold as fertilizer after the battle

d) All remains had been repatriated to their home countries within fifty years by official burial teams

2. What does MIA stand for, and what does the designation mean?

a) Military Identified Archive — the record of soldiers whose remains were recovered and documented

b) Missing In Action — soldiers whose deaths were unconfirmed and whose remains were not recovered

c) Memorial and Interment Agency — the organization responsible for repatriating war dead

d) Marine Infantry Archive — a designation specific to naval combat casualties

3. How has DNA analysis changed the identification of war dead from 20th-century conflicts?

a) DNA matching to family reference samples has allowed identification of over 1,000 previously missing American service members

b) DNA analysis has proven that most soldiers listed as MIA were actually buried in known locations that were fully accounted for

c) DNA has replaced all other identification methods, making dental records and isotope analysis obsolete

d) DNA analysis is only useful for remains less than 50 years old

Matching

Write the letter of the correct definition on the line next to each term.

Term	Definition
1. ___ Battlefield archaeology	A) The scientific process of determining the name and personal details of unidentified soldiers' remains
2. ___ Remains identification	B) Missing In Action — soldiers whose deaths were unconfirmed and remains not recovered
3. ___ Shrapnel	C) A long narrow excavation used as a defensive military position, especially in WWI
4. ___ Trench	D) Archaeological study of military conflict sites to understand battle events and recover human remains
5. ___ MIA	E) Metal fragments from exploded shells, bombs, or grenades found at conflict sites

Fill-in-the-Blank

1. Soldiers listed as _____ are those whose deaths were not confirmed and whose remains were not recovered during the conflict.

2. At Waterloo, archaeologists have carried out extensive _____ surveys of the battlefield.

3. WWI soldiers are sometimes identified today through _____ testing of their remains, matched against samples from living family members.

Short Answer

Answer each question in 2-4 complete sentences.

1. How does battlefield archaeology differ from a typical archaeological excavation in terms of what researchers are looking for and what the site represents?

2. What ethical considerations arise when excavating a battlefield site that is also a war grave?

3. Why is identifying and returning the remains of soldiers important, even a century after the war ended?