NO PREP

Shipwrecks of the Mediterranean

An Underwater Museum

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

Name: Period: Date:

Shipwrecks of the Mediterranean: An Underwater Museum

The Mediterranean as an Archaeological Treasure Trove

The Mediterranean Sea has been one of the world's busiest waterways for over three thousand years, and its floor is littered with the remains of thousands of shipwrecks that together form an extraordinary underwater museum of ancient life. From the Phoenicians and Greeks to the Romans and Byzantines, every major civilization that bordered the Mediterranean depended on maritime trade for its economic survival, and the inevitable losses from storms, piracy, navigational errors, and overloaded vessels left a trail of sunken ships stretching from the Strait of Gibraltar to the coasts of Lebanon. Scholars estimate that tens of thousands of ships sank in the Mediterranean during antiquity, carrying cargoes that ranged from

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scholars knew about ancient maritime trade came from written records and the occasional artifact that washed ashore or was pulled up in fishing nets. The invention of the aqualung by Jacques Cousteau and Emile Gagnan in 1943 made underwater sites far easier to reach, allowing divers to remain submerged long enough to conduct systematic excavations for the first time. Today, marine archaeologists use advanced technology including sonar mapping, remotely operated vehicles, photogrammetry for creating three-dimensional digital models of wreck sites, and saturation diving techniques to locate and carefully excavate shipwrecks at depths that were previously unreachable.

The Uluburun Wreck: A Bronze Age Time Capsule

One of the most important shipwrecks ever discovered is the Uluburun wreck, found in 1982 by a local sponge diver named Mehmed Cakir off the southwestern coast of Turkey at a depth of about 50 meters. Dating to approximately 1300 BCE during the Late Bronze Age, this ship carried one of the richest and most diverse cargoes ever recovered from the ancient world. Over eleven consecutive excavation seasons led by George Bass and Cemal Pulak of the Institute of Nautical Archaeology, divers made over 22,000 individual dives and recovered more than 18,000 individual artifacts, making it one of the most thoroughly excavated underwater sites in history. The cargo included ten tons of Cypriot copper ingots shaped like oxhides for easy handling, one ton of tin ingots from central Asia, hundreds of glass ingots from Egypt or Mesopotamia in shades of cobalt blue and turquoise, ebony logs from tropical Africa, elephant tusks and hippopotamus teeth from the eastern Mediterranean, Baltic amber that had traveled thousands of miles from northern Europe, and Canaanite jars filled with resin and other trade goods. The sheer weight of the metal cargo alone exceeded eleven tons, making this one of the most heavily laden merchant vessels known from the Bronze Age. The ship also carried weapons, tools, jewelry, and personal items belonging to the crew, including a gold scarab bearing the name of Egyptian Queen Nefertiti and a set of bronze merchant weights that suggest the crew conducted business using multiple measurement systems from different cultures. Archaeologists also recovered a wooden writing tablet, the oldest known example of a book-like object, which would have been coated in wax for recording commercial transactions during the voyage. What makes the Uluburun wreck so significant is not just the volume of its cargo but the number of different

civilizations represented in a single ship. Goods from at least seven distinct cultures, including Mycenaean Greek, Egyptian, Canaanite, Cypriot, Kassite, Assyrian, and Baltic, were packed aboard this vessel, demonstrating that international trade during the Bronze Age was far more extensive and interconnected than scholars had previously believed. The wreck fundamentally changed how historians understand the ancient economy, proving that a sophisticated system of long-distance exchange linked civilizations across thousands of miles long before the classical Greek and Roman periods. Analysis of the ship's hull revealed it was constructed from cedar and oak using a technique called plank-first construction, where the outer shell was built before the internal frame, a method common in the eastern Mediterranean during the Bronze Age.

Roman Trade Ships and the Antikythera Legacy

While the Uluburun wreck revealed Bronze Age trade, hundreds of Roman-era shipwrecks across the Mediterranean have painted a detailed picture of trade and daily life during the Roman Empire. Many of these ships carried amphorae, the large ceramic jars that Romans used to transport wine, olive oil, fish sauce, and grain across the empire. These vessels were so common that some areas of the Mediterranean sea floor are carpeted with amphora fragments, and certain ancient harbors like Carthage and Ostia have yielded thousands of intact examples. At Monte Testaccio in Rome, an artificial hill standing nearly 35 meters tall was created entirely from discarded amphorae fragments, estimated to contain the remains of roughly 53 million jars, a testament to the enormous scale of Roman maritime trade. Archaeologists can identify the origin of amphorae by their distinctive shapes and clay composition, allowing them to map Roman trade routes with remarkable precision and trace the movement of specific products from producer to consumer across vast distances. Some Roman cargo ships were enormous by ancient standards, capable of carrying over 400 tons of goods, and their wrecks reveal sophisticated construction techniques including mortise-and-tenon joinery and lead-sheathed hulls designed to resist marine organisms that would bore into exposed wood. Perhaps the most famous Mediterranean shipwreck is the Antikythera wreck, discovered in 1900 by Greek sponge divers off the island of Antikythera. One of the divers surfaced in a panic, claiming to have seen a heap of dead bodies on the sea floor, which turned out to be a cargo of bronze and marble statues. The ship, which sank around 70-60 BCE,

also carried glassware, jewelry, coins, and luxury goods likely destined for wealthy Roman collectors. Among the artifacts was the Antikythera mechanism, a corroded bronze device that scholars spent decades puzzling over before modern X-ray imaging and computed tomography revealed it to be an extraordinarily complex mechanical computer designed to predict astronomical positions and eclipses. This device, with its intricate system of at least 30 interlocking bronze gears, demonstrated a level of technological sophistication that was not matched again in Europe for over a thousand years. Recent studies have even identified inscriptions on the mechanism's surface that served as a kind of instruction manual, describing its functions in remarkable technical detail. The Antikythera mechanism remains one of the most remarkable archaeological discoveries ever made, a reminder that ancient civilizations were capable of far more than we often assume.

Key Information: Major Mediterranean Shipwrecks

Shipwreck	Key Detail
Uluburun Wreck	Bronze Age ship (~1300 BCE) found off Turkey with cargo from 7+ civilizations
Cargo Highlights	10 tons of copper, 1 ton of tin, glass ingots, ebony, ivory, Baltic amber
Antikythera Wreck	Roman-era ship (~70-60 BCE) found near Antikythera island in 1900
Antikythera Mechanism	Ancient mechanical computer with 30+ gears for predicting astronomical events
Roman Amphorae	Ceramic jars used to transport wine, oil, and fish sauce across the empire
Preservation Factor	Cold, dark, low-oxygen deep water slows decay of organic materials
Excavation Technology	Sonar mapping, remotely operated vehicles, and saturation diving

Shipwreck	Key Detail
Estimated Wrecks	Tens of thousands of ancient ships are believed to lie on the Mediterranean floor

Case Study: Loading the Uluburun Ship for Its Final Voyage

Ammon is a merchant captain in the eastern Mediterranean around 1300 BCE. His ship, a sturdy wooden vessel about 15 meters long, sits anchored at a Canaanite port on the coast of modern-day Lebanon. Over the past several weeks, Ammon has been loading cargo acquired from traders representing at least six different civilizations. Deep in the hold sit ten tons of flat copper ingots from Cyprus and one ton of tin from central Asia, metals that will be alloyed into bronze at their destination. Packed around them are hundreds of glass ingots from Egypt, ebony logs from Africa, jars of aromatic resin from Canaan, and a small pouch of amber beads that originated in the distant Baltic region. Ammon also carries elephant ivory, hippopotamus teeth, and finely crafted weapons and jewelry intended as diplomatic gifts. As his crew prepares to sail westward along the Turkish coast, Ammon checks the balance of his heavily loaded vessel. The waters ahead are known for sudden storms and rocky coastlines. His entire fortune rides in this single cargo hold.

1. What does the diversity of the Uluburun cargo tell us about the scale and complexity of Bronze Age trade networks?

2. Why are shipwrecks like the Uluburun particularly valuable to archaeologists compared to land-based sites from the same period?

Multiple Choice

1. What made the Uluburun wreck uniquely significant to historians?

    a) It was the oldest ship ever found in the Mediterranean

    b) It was the largest ancient ship ever discovered

    c) It contained cargo from at least seven different civilizations

    d) It carried the first known example of written navigation charts

2. What is the Antikythera mechanism?

    a) A Roman military weapon recovered from a warship

    b) A ceramic storage device designed for preserving food on long voyages

    c) A bronze navigation tool used to measure ocean depth

    d) An ancient mechanical computer that predicted astronomical events

3. Why do shipwrecks often preserve artifacts better than land-based sites?

    a) Ancient sailors coated their valuable cargo in preservative oils

    b) Cold, dark, oxygen-poor deep water slows the decay of materials

    c) Ocean salt water kills all bacteria that cause decay

    d) Sand on the ocean floor prevents corrosion chemically

Matching

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

Term	Definition
1. ___ amphora	A) The goods and materials carried aboard a trading vessel
2. ___ Uluburun	B) Ancient Greek geared device that predicted astronomical positions and eclipses
3. ___ marine archaeology	C) Bronze Age shipwreck found off Turkey carrying goods from many civilizations
4. ___ Antikythera mechanism	D) The scientific study of underwater archaeological sites and shipwrecks
5. ___ cargo	E) Large ceramic jar used by Romans to transport wine, oil, and fish sauce

Fill-in-the-Blank

1. The Uluburun ship carried ten tons of copper and one ton of _____ ingots.

2. Roman trade goods were commonly shipped in large ceramic jars called _____.

3. The Antikythera mechanism used over 30 interlocking _____ to function.

Short Answer

Answer each question in 2-4 complete sentences.

1. How do archaeologists use amphorae to reconstruct Roman trade routes?

_____

_____

_____

2. Why did the discovery of the Antikythera mechanism change views of ancient technology?

3. What technologies do modern marine archaeologists use to find and study shipwrecks?