NO PREP

Thonis-Heracleion

Egypt's Sunken Port City

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

Name: Period: Date:

Thonis-Heracleion: Egypt's Sunken Port City

A City Lost Beneath the Waves

For centuries, the ancient Egyptian port city of Thonis-Heracleion existed only in fragments of Greek and Egyptian texts. Ancient historians like Herodotus mentioned a great temple city at the mouth of the Nile, a bustling harbor where ships from across the Mediterranean loaded and unloaded cargo. Egyptian records referred to the city as Thonis, while the Greeks called it Heracleion, believing it was the place where the mythological hero Heracles first set foot in Egypt. Ancient sources described the city as a mandatory port of entry where all foreign ships arriving in Egypt were required to pay customs duties before proceeding upriver, making it one of the most economically important harbors in the ancient Mediterranean world. Despite these tantalizing references, no one could pinpoint the city's location. Many scholars assumed the accounts were exaggerated or purely legendary, particularly because the Nile Delta had changed so dramatically over the centuries that the ancient coastline no longer matched any modern geography. The city

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over more than a thousand years. Initial surveys revealed a site of extraordinary scale, stretching across an area of roughly eleven by fifteen kilometers on the seafloor. What Goddio had found was not a small settlement or a single shipwreck but an entire urban center, complete with temples, harbors, residential districts, and monumental statues, all preserved beneath the Mediterranean Sea. The discovery instantly became one of the most significant archaeological finds of the twenty-first century, drawing comparisons to the excavation of Pompeii and the opening of Tutankhamun's tomb.

Treasures Pulled from the Seabed

The excavations at Thonis-Heracleion have produced some of the most spectacular underwater archaeological discoveries ever made. Among the first major finds was a massive granite statue of the god Hapy, the Egyptian deity of the Nile flood. Standing over five meters tall and weighing approximately six tons, the red granite colossus was carefully raised from the seabed in a painstaking operation that required specialized lifting equipment and months of preparation. The statue had to be secured in a custom-built cradle underwater before being slowly winched to the surface by a crane barge, with divers monitoring every stage to prevent damage to the ancient stone. Alongside Hapy, the team recovered colossal statues of a pharaoh and a queen, each carved from pink granite and standing over five meters in height. These royal figures had toppled from their original positions when the city sank and lay face-down in the silt for centuries, their carved hieroglyphic inscriptions still sharp and legible despite more than two millennia submerged in saltwater. The oxygen-poor conditions of the thick sediment layer had created an almost airless seal around the sculptures, dramatically slowing the chemical weathering and biological erosion that would have destroyed exposed stone in open water. One of the most historically significant discoveries was a large black granite stela, a flat inscribed stone slab, nearly identical to the Decree of Naukratis found at the site of Naukratis in 1899. This stela confirmed beyond any doubt that the submerged ruins were indeed the legendary city of Thonis-Heracleion. The inscription established that Thonis and Heracleion were the same city, known by its Egyptian name and its Greek name simultaneously, and it detailed tax regulations on goods passing through the port, revealing the city's crucial role in Mediterranean trade. Divers also recovered hundreds of smaller artifacts including gold coins, bronze statues of

Egyptian gods like Osiris and Isis, lead and stone anchors from ancient ships, ceramic vessels from Greece, Phoenicia, and other Mediterranean civilizations, jewelry crafted from gold and precious stones, and ritual objects used in religious ceremonies at the city's temples. More than seventy ancient shipwrecks have been identified scattered across the harbor area, some deliberately sunk to block enemy naval access during times of conflict. Many of these vessels were remarkably well preserved, their wooden hulls protected by the same oxygen-poor sediment that shielded the stone statues, offering rare insights into ancient Mediterranean shipbuilding techniques.

Why the City Sank and What Lies Ahead

Understanding why Thonis-Heracleion sank has been one of the central questions driving the ongoing excavation. Geologists and archaeologists working with Goddio's team have determined that the city was built on unstable ground. Thonis-Heracleion sat on islands of clay and sand within the Nile Delta, a region prone to geological instability because the delta is constantly being reshaped by the river's sediment deposits and the encroaching sea. The immense weight of the city's monumental stone buildings gradually compressed the soft sediment beneath them in a process called soil liquefaction. When triggered by earthquakes or rising sea levels, the waterlogged clay essentially turned to liquid, causing the heavy structures to sink rapidly. This process did not happen all at once but rather in stages over several centuries, with portions of the city gradually slipping below water level while residents attempted to rebuild on higher ground or reinforce foundations with new construction. Archaeological evidence shows that inhabitants raised floor levels, added retaining walls, and constructed new buildings on top of older sunken ones, creating distinct layers of occupation that reveal a population struggling against a slowly losing battle with the encroaching sea. Core samples taken from the seabed sediment confirm at least three major subsidence events separated by decades of relative stability, during which the city continued to function as a working port despite its increasingly precarious situation. Evidence suggests that a series of catastrophic events, including earthquakes and tidal waves during the second century BCE, accelerated the city's collapse. By the end of the eighth century CE, the last remaining portions of the city had slipped beneath the waves entirely. Since the initial discovery in 2000, excavation at Thonis-Heracleion has continued every

summer diving season. Goddio and his international team of divers, archaeologists, and conservators return each year to map new sections of the submerged city, recover artifacts, and refine their understanding of the site's layout and history. In recent years, the team has uncovered a military vessel, a large cemetery with elaborate burials, and additional temple structures. The Egyptian government and international organizations have discussed the possibility of creating an underwater museum at the site, which would allow visitors to view the ruins without removing them from their resting place. Thonis-Heracleion remains one of the most important active underwater archaeological sites in the world, and experts estimate that only about five percent of the city has been explored so far.

Key Information: Thonis-Heracleion Key Facts

Feature	Detail
Location	Abu Qir Bay, 6.5 km off the coast of Alexandria, Egypt
Discovered By	Franck Goddio and the European Institute for Underwater Archaeology
Year Discovered	2000
Depth Below Surface	Approximately 10 meters under water and sediment
Why It Sank	Soil liquefaction caused by earthquakes on unstable Nile Delta clay
Major Artifact	5-meter granite statue of the god Hapy weighing 6 tons
Key Inscription	Black granite stela confirming the city's identity as Thonis-Heracleion
Exploration Status	Only about 5% of the submerged city explored to date

Case Study: A Face in the Silt

Marine archaeologist Dr. Laila Nassar adjusted her dive mask and descended through the murky green water of Abu Qir Bay. She was part of the summer 2018 excavation team working a newly opened grid square in what was believed to be a residential district of Thonis-Heracleion. Visibility was poor, limited to about two meters in the sediment-heavy water. As Laila fanned silt away from a stone surface with her gloved hand, a human face began to emerge from the seafloor. Two wide stone eyes stared up at her from beneath centuries of accumulated sand. The carved features were remarkably intact, with a serene expression and a royal headdress still clearly defined despite more than two thousand years underwater. Laila carefully documented the find with an underwater camera and placed a marker flag beside it. Over the following three weeks, the team used airlift suction equipment to slowly remove the surrounding sediment. The statue turned out to be a nearly complete granite figure of a Ptolemaic-era queen, standing over four meters tall. Its preservation was extraordinary, protected by the thick blanket of silt that had covered it since the city's collapse.

1. Why was the statue so well preserved after more than two thousand years underwater?

2. What steps should the archaeological team take after the initial discovery before attempting to move the statue?

Multiple Choice

1. What geological process primarily caused Thonis-Heracleion to sink beneath the Mediterranean Sea?

a) Soil liquefaction triggered by earthquakes on unstable delta clay

b) A massive tsunami that permanently flooded the coastline

c) Gradual erosion from rising river waters over many thousands of years

d) Volcanic eruption that melted the city's foundations

2. What was the significance of the black granite stela discovered at the underwater site?

a) It described the religious ceremonies at the Hapy temple

b) It confirmed the submerged ruins were Thonis-Heracleion

c) It recorded the names of every pharaoh who visited the city

d) It contained a map showing the location of hidden treasure rooms

3. Approximately how much of Thonis-Heracleion has been explored by archaeologists as of recent estimates?

a) About 25 percent

b) About 75 percent

c) About 50 percent

d) About 5 percent

Matching

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

Term	Definition
1. ___ Franck Goddio	A) Ancient port city known by both its Egyptian and Greek names simultaneously
2. ___ Stela	B) Process where waterlogged clay turns to liquid under pressure causing structures to sink
3. ___ Soil liquefaction	C) French underwater archaeologist who discovered the sunken city in 2000
4. ___ Hapy	D) A flat inscribed stone slab that confirmed the identity of the submerged ruins
5. ___ Thonis-Heracleion	E) Egyptian god of the Nile flood whose five-meter granite statue was recovered from the seabed

Fill-in-the-Blank

1. Franck Goddio used sonar and _____ surveys to locate the city.

2. The city was built on unstable islands of clay in the _____ Delta.

3. More than seventy ancient _____ have been found in the harbor.

Short Answer

Answer each question in 2-4 complete sentences.

1. Why did scholars doubt the existence of Thonis-Heracleion before its discovery?

_____

_____

_____

2. How did the weight of the city's buildings contribute to its eventual collapse?

3. Why might an underwater museum be preferable to removing artifacts from the site?