

The Genesis of Giants: A Comprehensive Analysis of the Formation of Archaeological Tells

Introduction: Defining the Tell as an Archaeological Phenomenon

Across the vast, sun-drenched landscapes of the Near East, the Balkans, and parts of Africa and Asia, the terrain is punctuated by enigmatic, man-made hills. These are not natural geological formations but are instead the accumulated remnants of ancient human endeavor, artificial mountains built layer by layer from the debris of forgotten cities and towns. Known to archaeologists as tells, these mounds represent one of the most significant and information-rich types of archaeological sites in the world. They are, in essence, vertical archives of history, preserving in their stratified depths the story of human settlement, societal evolution, and the profound, multi-millennial relationship between people and place. Understanding the formation of these city mounds requires a multidisciplinary approach, delving into geology, architecture, cultural anthropology, and environmental science to unravel the complex interplay of factors that allowed these unique features to grow. This report provides an exhaustive analysis of the genesis of tells, exploring their definition and distribution, their physical composition and the stratigraphic principles used to interpret them, the architectural and cultural drivers of their formation, and their unparalleled importance as a scientific resource for understanding the human past.

Defining the Tell: An Artificial Mountain of History

In the lexicon of archaeology, a tell is defined as an artificial topographical feature, a mound composed of the accumulated and stratified debris from a succession of settlements constructed on the same site over extended periods.¹ These mounds are the product of generations of human life; they are built from the refuse of peoples who inhabited them, the remnants of their homes, the objects they lost or discarded, and the natural sediments that became incorporated over time.¹ The process is one of gradual accretion. As old structures, often made of earth-based materials, collapsed or were demolished, new ones were built upon the leveled ruins. This cycle, repeated over centuries or even millennia, caused the

ground level of the settlement to rise steadily, creating a prominent mound that stands in relief against the surrounding landscape.²

The scale of these mounds can be immense, attesting to the longevity and density of the settlements they contain. For instance, the tell of Çatalhöyük in Turkey, a proto-city occupied during the Neolithic period, rose approximately 20 meters (66 feet) above the Konya Plain.⁴ Even more imposing is Tell Brak in northeastern Syria, an early urban center whose main mound reaches a height of over 40 meters (130 feet).³ The horizontal extent of these sites is equally variable, ranging from small mounds just five meters in diameter to vast settlement complexes, like that of Tell Brak, that can span a kilometer or more when their surrounding "suburbs" are included.² These dimensions are a direct physical manifestation of the duration and intensity of human occupation, a testament to the forces that anchored communities to a single location for thousands of years.

A Global Lexicon: Naming the Mounds

While the archaeological phenomenon is broadly consistent, the terminology used to describe these mounds varies by region, reflecting the diverse linguistic and cultural landscapes in which they are found. The word *tell* itself is of Arabic origin and is the standard term used throughout the Levant and Mesopotamia, regions where these sites are particularly abundant.⁷ Consequently, it is often incorporated into the names of famous sites, such as Tell es-Sultan, the ancient mound of Jericho⁸, or Tell Abu Hureyra in Syria.⁹

Moving northward into Anatolia and Persia, different terms prevail. In Turkey, the word *höyük* is synonymous with *tell*, appearing in the names of some of the most significant archaeological sites in the country, including Çatalhöyük ("Fork Mound") and Çadır Höyük.⁴ Similarly, the term *tepe*, of Persian origin, is used for mounds in Turkey and Iran, most famously at Göbekli Tepe ("Potbelly Hill").² In the academic literature concerning West Africa, where *tell* sites are also a significant feature of the archaeological landscape, the more general English term *mound* is commonly employed. This term is used to refer not only to habitation tells but also to other anthropogenic mounded features like burial mounds, necessitating careful contextual definition in comparative analyses.¹³ This regional variation in nomenclature underscores a critical point: while the underlying process of formation is similar, the cultural context in which these mounds were created was distinct and localized.

Geographic Distribution: From the Fertile Crescent to the World

The geographical heartland of *tell* formation is the Middle and Near East, a vast region stretching from the Balkans in the west to northwestern India in the east.² This area, and particularly the Fertile Crescent within it, was the cradle of the Neolithic Revolution, where humanity first transitioned from nomadic hunting and gathering to sedentary agriculture and, eventually, to urban living. It is in this context of long-term, permanent settlement that the

conditions for tell formation were perfected. Famous examples like Troy in northwestern Turkey, with its nine distinct layers of occupation spanning from approximately 3000 BCE to 450 CE, epitomize the deep, stratified history these sites contain.²

However, the phenomenon is by no means restricted to the Near East. In southeastern Europe, Neolithic communities on the Great Hungarian Plain began to coalesce into larger, more durable villages around 5200 BCE. Some of these evolved into settlement mounds, or tells, as a result of hundreds of years of continuous habitation, mirroring the process seen further east.¹⁴ Furthermore, extensive archaeological research has identified large numbers of tell sites across West Africa, from the inland Niger Delta to Burkina Faso, in a wide variety of environmental and cultural zones.¹³ The origins of these West African tells date back to the second millennium BCE, and they became increasingly common throughout the first millennia BCE and CE.

This widespread geographical distribution points to a powerful case of convergent cultural evolution. The appearance of tells in disparate regions, inhabited by distinct cultural groups with different languages and traditions, suggests that tell formation is not the result of a single idea spreading from a single origin point. Rather, it appears to be a common solution that different societies independently arrived at when faced with a similar set of circumstances: a commitment to a sedentary lifestyle, a reliance on earth-based materials for construction, and a cultural or practical desire to remain anchored to a specific location over many generations. The tell is a physical manifestation of a successful, long-term adaptation to a settled way of life, an adaptation that was discovered and replicated in various corners of the ancient world. The very form of the tell, rising from the surrounding plains, made it a dominant feature of the landscape. This was not merely an accidental byproduct of settlement; it became an active part of the site's function. Early sites like Göbekli Tepe were intentionally built on high points to command a view of the landscape.¹¹ As tells grew organically, they created their own artificial high ground, which conferred both practical and symbolic advantages. The elevation offered better visibility for defense, a clear vantage point over agricultural lands, and a powerful physical statement of a community's permanence, territory, and historical legacy. The mound, therefore, was not a passive record but an active participant in shaping the human experience of the landscape, projecting power and identity across the generations.

The Anatomy of a Tell: Stratigraphy and Composition

To the untrained eye, a tell may appear as a simple hill of earth. To an archaeologist, however, it is a complex, structured archive, a "layer-cake of history" that can be meticulously deconstructed to reveal the story of its creation. The science of reading these layers is known as stratigraphy, and the substance of the layers themselves—the composition of the tell—provides the raw data for understanding the lives of its former inhabitants.

Deconstructing the tell's anatomy reveals it to be a product of both passive accumulation and active, culturally mediated deposition, a curated archive as much as an accidental one.

The Layer-Cake of History: The Principle of Stratigraphy

Stratigraphy is one of the most fundamental concepts in archaeology. It is the study and interpretation of the stratified layers, or *strata*, of soil, sediment, and debris that accumulate on top of one another over time.¹⁵ The guiding principle of stratigraphy is the geological Law of Superposition, which states that if a sequence of layers is undisturbed, the oldest layers will be at the bottom and the youngest, most recent layers will be at the top.¹⁶ An intuitive analogy is a laundry basket: the clothes worn on Monday are at the bottom, while those worn on Friday are on top, creating a relative chronological sequence from oldest to most recent.¹⁶

Archaeologists apply this law to the excavation of tells. Each individual stratum, which can be differentiated by factors such as soil color, texture, or composition, represents a distinct period of time or a specific event in the site's history.¹⁶ To preserve the integrity of this record, excavation proceeds stratigraphically—that is, each layer is carefully removed and documented as a separate unit before proceeding to the layer below it.¹⁷ This painstaking process involves a specialized vocabulary. A single discernible layer of occupation is a *stratum*.¹⁵ To preserve a visible record of the layers, archaeologists often leave a *balk*, a vertical, unexcavated wall of earth between excavation squares, which displays the site's stratigraphy in profile.¹⁵ The ultimate goal is to find artifacts *in situ*, a Latin term meaning "in its original place," as their position within a specific stratum is what gives them their scientific value.¹⁵

The precise three-dimensional location of an artifact is known as its *provenience*. Recording provenience is paramount because it establishes an artifact's *context*—its relationship to the soil layer it was found in and to the other artifacts and features around it.¹⁶ An artifact removed from a tell without its provenience being recorded is an object stripped of its story. It loses its ability to help date a layer or to inform our understanding of the site's function. For example, a bone awl found in a lower stratum (Stratum E) is demonstrably older than a horseshoe found in an upper stratum (Stratum B).¹⁶ This relative dating, based on the sequence of layers, can be anchored with absolute dates through methods like radiocarbon dating of organic materials found within the strata, allowing for the creation of a robust chronological framework for the entire history of the settlement.¹³

The Substance of Settlement: Composition of a Tell

The material that constitutes a tell is, quite literally, the substance of past lives. Tells are massive accumulations of the debris generated by human activity, piled up over the course of a settlement's existence.¹ This debris is a heterogeneous mixture of collapsed house materials, refuse from daily life, lost or broken objects, and sediments deposited by natural forces like wind and water.⁹

A primary component of this accumulation is *midden*, the archaeological term for the deposits of rubbish, domestic waste, and other by-products of human occupation.¹⁹ Midden layers are archaeological treasure troves, providing a direct window into past diets (through animal bones and plant remains), craft activities (through manufacturing debris), and consumption patterns (through broken pottery). At the Ness of Brodgar, a Neolithic site in Orkney, midden deposits were not just refuse piles but grew into monumental mounds that came to act as territorial markers or memorials.¹⁹

The overall matrix of a tell is a complex amalgam. It consists primarily of decayed and collapsed mudbrick, which forms the bulk of the soil.³ Interspersed within this matrix are lenses of ash from hearths and fires, layers of organic waste, and a dense concentration of cultural materials: countless pottery sherds, fragments of stone tools, animal bones, and, in many cases, the remains of the dead themselves, who were often buried within the settlement.⁴ Each of these components tells a part of the story, and their careful excavation and analysis allow archaeologists to reconstruct the environment, economy, and social world of the people who built the mound.

While some of this accumulation is the result of passive processes like wind-blown sand or the simple discarding of trash, a deeper analysis reveals that tell formation is often a highly active and culturally mediated process. The mound is not merely an accidental garbage dump that grows over time. Evidence from sites around the world indicates that the inhabitants were active agents in the creation of their own landscape. At Neolithic sites in Orkney, for example, midden material was not simply thrown away; it was purposefully used as a construction material, spread out to create level platforms for new buildings.¹⁹ This was a deliberate act of landscape engineering using the by-products of daily life. Similarly, the deposition of very fine, polished stone artifacts within the midden layers at the Ness of Brodgar suggests that these "rubbish" areas were also considered appropriate places for the ritual "burial" of important objects at the end of their use-lives, transcending their function as mere dumps.¹⁹ Research at Kirikongo in Burkina Faso provides an even more profound example of active, ritualized deposition. Here, the evidence suggests that architectural remnants were intentionally created and preserved through rituals associated with the veneration of ancestors. The slow, deliberate process of stratification was tied to cycles of social memory, with new construction only taking place after the memory of a specific ancestor had faded from the living community.¹³ These examples demonstrate that a tell is a complex feature shaped by both mundane discard and purposeful, often ritualized, construction and deposition. It is a curated archive, not just an accumulated one, reflecting the conscious choices and worldview of its creators.

The Engine of Accretion: The Centrality of Mudbrick Architecture

While cultural practices and strategic location explain why people remained in one place, the

physical mechanism that drove the vertical growth of tells—the engine of their accretion—was a specific technological choice: the widespread use of sun-dried mudbrick for construction. The inherent properties of this building material, particularly its limited durability, set in motion a relentless cycle of construction, decay, and rebuilding that, over millennia, transformed flat settlements into towering mounds. This section examines the properties of mudbrick and details the lifecycle of this architecture, which lies at the heart of tell formation.

The Ubiquitous Building Block: Sun-Dried Mudbrick (Adobe)

In the ancient Near East, Egypt, and other arid or semi-arid regions of the world, unfired, sun-dried mudbrick (also known as adobe) was the primary building material for millennia.²¹ Its use was ubiquitous, employed for structures of every scale and status, from the humblest domestic dwellings to the most expansive royal palaces and massive temple enclosure walls.²¹ The history of its use is ancient, with evidence of mudbrick construction dating back to the Pre-Pottery Neolithic A period (c. 9000 BCE) at sites like Jericho.²²

The production of mudbrick was a model of efficiency, relying on readily available local materials. The basic recipe consisted of a mixture of mud—a soil containing the right balance of clay, silt, and sand—and water.²² To this base, a temper was added. This was typically an organic binding material like chopped straw, grain chaff, or even animal dung, which increased the brick's tensile strength and prevented it from cracking as it dried.²² The process of making the bricks was straightforward: workers would mix the ingredients, often by kneading the mud with their feet, press the mixture into wooden molds, and then turn the bricks out onto the ground to dry and harden in the sun for a week or more.²⁵

The advantages of mudbrick were numerous, making it the logical choice for most construction projects. Compared to the quarrying, transporting, and dressing of stone, mudbrick was far more economical and faster to produce, especially for large-scale building campaigns.²¹ As a modular and regularized building material, it was also quick and easy to build with, requiring little modification once laid.²³ Furthermore, mudbrick structures offered significantly better interior climate control than stone buildings. Their thick earthen walls had high thermal mass, absorbing the sun's heat during the day and slowly releasing it at night, which created a more comfortable and stable indoor temperature in regions with hot days and cool nights.²¹ This combination of economy, ease of use, and climatic suitability ensured its status as the default architectural technology for thousands of years.

The Cycle of Construction, Decay, and Rebirth

The very properties that made mudbrick advantageous also contained the seeds of a tell's growth. Because the bricks were unfired, they were inherently vulnerable to the elements, particularly water.²⁰ A heavy rainstorm could erode walls, and persistent moisture from flooding or rising damp could compromise the structural integrity of an entire building,

causing it to "melt" back into the earth from which it came.²⁰ Structures were also easily destroyed by fire during conflict, although paradoxically, the intense heat of a burning building could fire the bricks, making them more durable and adding strength to the resulting debris layer.²⁰

This cycle of decay and destruction is the primary driver of a tell's vertical growth. When a mudbrick building reached the end of its useful life, whether through slow decay or sudden destruction, the inhabitants rarely cleared the debris away completely. Instead, they would typically level the rubble of the old structure, perhaps filling in the remaining wall stumps, to create a new, stable, and slightly elevated foundation platform upon which to build its replacement.³ This process was repeated generation after generation. With each cycle of rebuilding, the ground level of the settlement inexorably rose.

This process is clearly visible in the deep archaeological sequences of major tell sites. At Jericho, archaeologists have unearthed the remains of more than 20 successive settlements, each built atop the ruins of the last, creating a mound that encapsulates 11,000 years of history.⁷ Similarly, the 40-meter-high mound of Tell Brak is composed of layer upon layer of ancient occupation, with buildings constructed largely in mudbrick that, over time, simply decayed to form part of the mud fabric of the mound itself.³

This dynamic creates a powerful material-culture feedback loop that is fundamental to understanding tell formation. The process begins with a society's choice to use mudbrick, a decision driven by its economy and accessibility. The key consequence of this choice is the material's low durability against environmental and human forces, leading to the periodic collapse or destruction of structures. Inhabitants, who are tied to the location for strategic or cultural reasons, respond by leveling the debris and rebuilding on the same spot. This action results in the gradual raising of the settlement's ground level, creating a mound. This new, elevated position then provides tangible benefits, such as improved defense from floods or enemies and greater social prominence. These benefits reinforce the desirability of the site, encouraging the community to remain and perpetuating the cycle of rebuilding. This demonstrates a direct, long-term causal chain linking a society's technological choices, its settlement patterns, and the very morphology of its landscape.

Human-Environment Interaction and Cultural Drivers of Tell Formation

The physical process of accretion through mudbrick decay explains *how* tells grew vertically, but it does not explain *why* communities chose to remain rooted to a single spot for millennia, allowing this process to unfold. The answer lies in a complex interplay between the practical advantages of a location and the powerful cultural forces that forged an unbreakable bond between a people and their place. Tell formation was not simply a passive response to geography; it was driven by active human agency, strategic decision-making, and deep-seated ritual and social attachments that transformed a settlement into an ancestral

home.

The Power of Place: Strategic and Resource-Rich Locations

The initial decision to establish a settlement was almost always grounded in sound environmental and strategic logic. Access to critical resources was a primary factor. A reliable, perennial water source, in particular, was a powerful magnet for settlement in the often-arid landscapes of the Near East. The site of Jericho, which would become one of the world's oldest continuously inhabited cities, first emerged around the 'Ain es-Sultan spring, a natural oasis that attracted human habitation for thousands of years.⁷ This spring was the lifeblood of the community, making its location exceptionally valuable and worthy of long-term investment and defense.

Proximity to fertile land suitable for agriculture was another crucial consideration, especially with the onset of the Neolithic Revolution. The settlement of Çatalhöyük, for example, was established on alluvial clay soils that were likely favorable for early farming, providing the subsistence base necessary to support a large, sedentary population.⁴ The surrounding environment, which at the time was a rich wetland, also offered a wide range of resources, including fish, waterfowl, and wild game, further enhancing the location's appeal.²⁸

Beyond subsistence resources, strategic control over transportation and trade routes was a major factor in the long-term success and growth of many settlements. Tell Brak's rise to prominence as an early urban center was intrinsically linked to its strategic position on a major overland route that connected the resource-rich mountains of Anatolia with the populous cities of southern Mesopotamia, while also controlling north-south traffic between the Euphrates Valley and the Levant.³ Such a location would have been a hub of economic activity and cultural exchange, providing a strong incentive for continuous occupation and investment in the site's infrastructure and defense.

The Agency of Inhabitants: Cultural and Ritual Anchors

While geography and resources provided the initial rationale for settlement, it was culture and ritual that provided the "glue" holding communities to these locations for thousands of years. Tell formation cannot be understood without appreciating the active cultural choices and beliefs that created a profound, multi-generational attachment to place.¹³

One of the most powerful of these cultural anchors was the widespread practice of intramural burial—the burying of the dead within the confines of the settlement, often directly beneath the floors of occupied houses. This practice is well-documented at numerous key sites. At Çatalhöyük, human remains have been found in pits beneath the floors, platforms, and hearths of the mudbrick houses.⁴ Similarly, at Neolithic Jericho, the dead were buried under the floors of their circular dwellings.⁷ This act fundamentally transformed the nature of the house. It was no longer merely a shelter for the living; it became a family mausoleum, a sacred

space that physically united the current generation with their deceased ancestors. Abandoning such a house would mean abandoning the family's tomb and severing a tangible link to its lineage.

This practice points to a deeper worldview, one in which the living and the dead were not strictly separated. Archaeological research in West Africa explicitly suggests that some tells formed through a deeply held cultural belief in the co-residence of the living and ancestral communities.¹³ Rebuilding on the exact same spot was a way of maintaining this sacred connection, of keeping the community physically and spiritually whole. At the site of Kirikongo, it has been argued that the mound's growth was directly tied to cycles of social memory; new houses, often with foundation ritual deposits, were constructed over older ones only after the active memory of the individuals buried below had faded from the living community, a process that could take 80 to 100 years.¹³ This ritualized cycle of construction and remembrance provides a powerful cultural logic for the slow, steady accretion of the tell.

Over time, the tell itself becomes a monument. As it grows in height and prominence, it becomes a physical embodiment of the community's history, lineage, and endurance. It stands as a testament to their ancestors and their continuous presence in the landscape. To abandon such a monument would be a profound cultural and symbolic rupture, a break with the past that many societies were unwilling to make. The mound becomes an ancestral locus, a sacred center of the world for its inhabitants.

This dynamic reveals that human-environment interaction in the context of tell formation is a complex, two-way street. Initially, human settlement is an act of adaptation to the natural environment; a community chooses a location based on its favorable characteristics, such as a spring or fertile soil.³⁰ However, over centuries of occupation, the cumulative effect of their activities—building with mudbrick, discarding waste, burying their dead—creates a massive artificial landform: the tell. This new topography fundamentally modifies the local environment. It creates a new high ground, alters drainage patterns, and becomes the most dominant feature in the landscape. Subsequent generations are no longer simply interacting with the original, natural environment. They are interacting with the anthropogenic environment created by their ancestors. The tell itself becomes the primary environmental feature to which they must adapt, a reality vividly illustrated at Iron Age Jericho, where inhabitants had to cut staircases directly into the steep sides of the mound their predecessors had built in order to access their homes on top.³¹

Case Studies in Tell Formation and Urban Evolution

The abstract principles of tell formation—stratigraphy, mudbrick architecture, and cultural attachment—are best understood through their application to specific archaeological sites. The rich and varied records of tells across the Near East provide concrete examples of how these processes played out over millennia. By examining four key sites—Göbekli Tepe, Çatalhöyük, Jericho, and Tell Brak—it is possible to trace the evolution of mound-building from its earliest ritual origins to the development of complex urban centers. Each site offers a

unique window into a different facet of tell development and the societal transformations they represent.

Table 1: Comparative Analysis of Key Tell Sites				
Attribute	Göbekli Tepe	Çatalhöyük	Jericho (Tell es-Sultan)	Tell Brak (Nagar)
Location	Southeastern Turkey	Central Anatolia, Turkey	Jordan Valley, Palestine	Northeastern Syria
Approx. Size	Tell on a limestone plateau ¹¹	37 ha (two mounds) ³²	5.93 ha tell ⁸	~300 ha complex (main tell + suburbs) ⁶
Period of Occupation	c. 9500–8000 BCE ¹¹	c. 7400–5200 BCE ³²	c. 9500 BCE – Iron Age ⁷	c. 6000 BCE – 2nd Millennium BCE ²⁹
Key Features	Megalithic T-shaped pillars in circular enclosures; deliberate backfilling ¹¹	Densely packed, streetless mudbrick houses with roof access; intramural burials; rich mural art ⁴	Deep stratigraphy (29 phases); Neolithic stone tower and wall; plastered skulls ⁷	Early indigenous urbanism; monumental Eye Temple; Akkadian administrative palace; extensive suburbs ⁵
Primary Significance	Demonstrates monumental, ritual mound-building before widespread agriculture ³⁵	A prime example of a large, egalitarian proto-city formed by domestic architecture ³²	Unparalleled record of occupational longevity and the transition from foraging to urban life ⁷	Challenges the southern Mesopotamian model of urban origins with evidence of large-scale, indigenous northern urbanism ⁶

The Ritual Progenitor: Göbekli Tepe

Located on a mountain ridge in southeastern Turkey, Göbekli Tepe stands as a testament to the deep antiquity of monumental construction. Dating to the Pre-Pottery Neolithic, around 9500 BCE, the site is not a classic habitation tell formed from domestic refuse, but rather a man-made mound created for ritual purposes.¹¹ Its most famous features are a series of large,

circular structures containing massive, T-shaped limestone pillars, some standing up to 5.5 meters tall and weighing as much as 50 tons.¹² These megaliths are intricately carved with images of wild animals, such as lions, foxes, and birds, as well as abstract symbols.¹¹ The relevance of Göbekli Tepe to the study of tell formation is profound. It demonstrates that the social organization, technological capability, and communal will required to undertake massive earth- and stone-moving projects existed long before the advent of widespread agriculture and settled village life.³⁵ For centuries, the prevailing theory was that the Neolithic Revolution—the shift to farming—led to sedentism and, eventually, to the social complexity needed for monumental building. Göbekli Tepe challenges this narrative, suggesting that the immense collaborative effort required to build and maintain a ritual center may have been a catalyst for people to settle down, rather than a consequence of it.¹¹ Furthermore, the mound at Göbekli Tepe was formed, at least in part, by the deliberate and systematic backfilling of its circular enclosures after a period of use.¹¹ This was not a slow accumulation of debris but an intentional act of mound creation. In this sense, Göbekli Tepe can be seen as a "proto-tell," a monumental mound born not of domestic life, but of shared belief and ritual action.

The Agglomerated Village: Çatalhöyük

If Göbekli Tepe represents the ritual origins of mound-building, Çatalhöyük in central Anatolia represents the classic model of a tell formed by domestic accretion. Occupied between approximately 7400 and 5200 BCE, Çatalhöyük grew into a vast proto-city consisting of two distinct mounds, the larger and older of which housed an estimated population of 3,500 to 8,000 people at its peak.⁴ It is a prime example of a tell formed almost entirely from the remains of domestic architecture.

The settlement is renowned for its unique urban layout. It was a dense, agglomerated maze of mudbrick houses built directly against one another, with no streets or footpaths at ground level.⁴ Access to the individual dwellings was through openings in the flat roofs, with inhabitants traversing the rooftops of the town as their primary thoroughfares.³³ This tightly packed arrangement, combined with the continuous practice of demolishing old houses and building new ones on top of the rubble, provides a perfect illustration of the physical process of tell formation.³⁹ The site's deep stratigraphy, with 18 distinct levels of Neolithic occupation identified in the eastern mound, testifies to over 2,000 years of this continuous cycle.⁴ Çatalhöyük also showcases the powerful cultural forces that sustained such a long-lived community. The houses were not just shelters but were rich symbolic spaces, decorated with vivid murals, plaster reliefs of animals, and installations of bull horns.⁴ The practice of burying the dead beneath the house floors cemented the connection between the family, their home, and their ancestors, providing a compelling reason to remain and rebuild in the same location for millennia.⁴

The Icon of Longevity: Jericho (Tell es-Sultan)

The mound of Tell es-Sultan, ancient Jericho, is the quintessential example of a tell with deep and complex stratigraphy, offering an unparalleled record of human settlement in the Levant. Located in the Jordan Valley and nourished by a perennial spring, the site was occupied almost continuously from the time of Natufian hunter-gatherers around 9500 BCE through the Bronze and Iron Ages.⁷ The tell itself is an oval-shaped mound containing the archaeological remains of more than 20 successive settlements, with a total of 29 distinct phases of occupation identified by excavators.⁷

Jericho's immense time depth makes it a textbook site for understanding long-term cultural and technological change as preserved in a tell's layers. Among its most spectacular findings are the remnants of a massive stone wall, over 3.6 meters high, and an associated stone tower standing over 8.5 meters tall, built during the Pre-Pottery Neolithic A (PPNA) period around 8000 BCE.⁷ These are among the world's oldest known fortifications and attest to a remarkable degree of social organization and communal labor at a very early date.⁷ The tell's stratigraphy documents major shifts in human society, including the transition from circular to rectilinear mudbrick houses, the development of new subsistence strategies with an expanding range of domesticated plants and animals, and the emergence of complex ritual practices, famously represented by the plastered human skulls found buried beneath house floors.⁷ The 11,000-year sequence preserved at Tell es-Sultan makes it an icon of occupational longevity and a crucial site for studying the entire arc of human history from the first sedentary communities to the rise of urban culture.

The Indigenous Urban Center: Tell Brak

Tell Brak, a commanding mound in northeastern Syria, provides a critical case study in the role of tells in documenting the rise of urbanism. For many years, the consensus model held that cities first emerged in southern Mesopotamia and the concept of urban life spread northward. The extensive excavations at Tell Brak have fundamentally challenged this narrative. The tell's stratigraphy reveals a process of indigenous urban development that began as early as the late 5th millennium BCE, reaching a truly urban scale by the early 4th millennium BCE, centuries before the Uruk expansion from the south.⁶

The site is massive, with a 40-meter-high central tell and an extensive outer town that, at its height, formed a settlement complex of nearly 300 hectares.⁶ The mound's layers record the settlement's evolution from a small village around 6000 BCE to a sprawling, complex city.³ This urban center featured monumental public architecture, including the famous "Eye Temple," so named for the hundreds of small alabaster "eye idols" found there, which dates to the 4th millennium BCE.⁵ Later layers from the 3rd millennium BCE revealed a large palace attributed to the Akkadian king Naram-Sin, indicating that Brak (then known as Nagar) served as a major administrative center for the Akkadian Empire.³ The study of Tell Brak's growth,

recorded in the deep layers of its central mound and the spatial distribution of its suburbs, demonstrates the indispensable role of tells in reconstructing the complex processes of early urbanization and revealing that the path to city life was not singular, but had multiple, independent origins.⁶

Distinguishing Tells from Other Anthropogenic Mounds

The term "mound" is a broad descriptor for a heaped pile of earth or debris, and in archaeology, it encompasses a variety of man-made features created for different purposes.⁴² While tells are a type of mound, it is crucial to distinguish them from other forms, such as burial, platform, and effigy mounds. This distinction is not merely semantic; it is fundamental to understanding the unique formation process and scientific significance of tells. The primary difference lies in their function and method of creation: tells are the incidental byproducts of long-term habitation, while other mounds are typically purpose-built structures created in a relatively short period for specific funerary or ceremonial functions.

Table 2: Typology of Archaeological Mounds				
Mound Type	Primary Function	Composition	Formation Process	Example
Habitation Mound (Tell)	Long-term settlement and habitation. ¹	Stratified layers of occupational debris: decayed mudbrick, domestic waste (midden), ash, artifacts. ⁹	Gradual, multi-generational accumulation from the cycle of building, decay, and rebuilding. ²	Tell es-Sultan (Jericho), Palestine ⁷
Burial Mound (Tumulus/Barrow)	Funerary; to cover and mark one or more tombs. ⁴³	Curated earth and/or stone fill built over tombs; may contain elaborate grave goods. ⁴⁵	Purpose-built, often in a single construction event or a few distinct phases, to create a monument. ⁴⁴	Grave Creek Mound (Adena culture), USA ⁴⁵
Platform Mound	Ceremonial; to serve as a raised foundation for temples, elite	Engineered fill of earth, stone, or other materials, designed for	Deliberate, engineered construction to create a specific	Monks Mound (Cahokia), USA ⁴⁴

	residences, or public buildings. ⁴⁴	stability. ⁴⁵	architectural form (e.g., flat-topped pyramid). ⁴⁴	
Effigy Mound	Symbolic and/or ritual; shaped to represent animals or spiritual beings. ⁴³	Earth, sometimes with stone outlines or features, sculpted into a specific shape. ⁴⁵	Purpose-built as a large-scale earthwork sculpture (geoglyph). ⁴⁵	Serpent Mound (Ohio), USA ⁴⁴

Habitation Mounds (Tells)

As has been established, tells are unique in that their formation is primarily the result of continuous or near-continuous settlement. They are archaeological sites *and* landforms simultaneously. Their composition is a deep, stratified sequence of domestic and architectural debris, including decayed mudbrick, midden, ash, and countless artifacts, all accumulated over centuries or millennia.¹ Their growth is organic and gradual, a direct consequence of the lifecycle of the settlement itself.² While tells often contain human burials as part of the practice of intramural burial, their primary function was as a place for the living, and their formation process is one of accretion, not singular construction.⁴

Burial Mounds (Tumuli, Barrows)

In stark contrast to tells, burial mounds—known by various names such as tumuli or barrows—are structures built for a single, specific purpose: to house and memorialize the dead.⁴² Their primary function is funerary. These mounds are constructed intentionally, often in a single, massive effort, by heaping earth and/or stone over one or more tombs.⁴⁴ Their internal structure is not one of stratified occupation layers but is instead organized around the burial chamber(s). They may contain elaborate grave goods intended for the deceased in the afterlife, a feature that can indicate the social status of the individuals interred within.⁴⁶ Examples are found worldwide, from the conical mounds of the Adena and Hopewell cultures in North America to the Neolithic long barrows of Europe and the Kofun of Japan.⁴² Their construction is an event, not a process of slow accumulation.

Ceremonial and Platform Mounds

Platform mounds are another category of purpose-built earthworks. These are typically large, engineered structures, often with flat tops and rectangular or pyramidal shapes, constructed

to serve as foundations for other important buildings.⁴⁵ Their function was ceremonial or political, elevating temples, elite residences, or public gathering spaces above the surrounding populace, both literally and symbolically.⁴⁴ The Mississippian culture of North America was a prolific builder of platform mounds, with the most famous example being the monumental Monks Mound at the city of Cahokia, which served as the base for the residence of the paramount chief.⁴⁴ Like burial mounds, their construction was a deliberate act of engineering designed to achieve a specific architectural form, not the result of accumulated domestic refuse.

Effigy Mounds

Effigy mounds represent a fourth distinct category, defined by their unique form. These are earthworks that have been sculpted into the shape of animals (such as birds, bears, or serpents), humanoid figures, or other symbolic beings.⁴³ Their purpose is believed to be primarily ritualistic or spiritual. The American Midwest is the global center for this type of mound, with the most famous example being the Great Serpent Mound in Ohio, an undulating earthen embankment stretching over 400 meters in length.⁴⁴ These are works of landscape art, their meaning tied to their form and their relationship to the cosmos or the spiritual world. Their formation is one of deliberate sculpting, entirely different from the layered growth of a habitation tell.

The Tell as a Scientific Resource: Modern Investigation and Its Contributions

Archaeological tells are more than just impressive landforms; they are unparalleled scientific resources. Their deep, stratified deposits act as high-resolution archives of the past, preserving a continuous record of human activity and environmental change over vast timescales. The development of sophisticated investigative methodologies, from traditional excavation techniques to advanced remote sensing, has unlocked the potential of these archives. The study of tells has, in turn, made fundamental contributions to our understanding of some of the most critical transformations in human history, including the origins of agriculture, the rise of cities, and the long-term dynamics of human-environment interaction.

Reading the Mound: Methodologies of Investigation

The investigation of a tell is a complex undertaking that combines time-honored fieldwork with cutting-edge technology. The foundation of tell archaeology remains the meticulous, stratigraphic excavation. Archaeologists use hand tools, most notably the trowel, to carefully

scrape away thin layers of soil, ensuring that artifacts from different strata are kept separate to maintain their contextual integrity.⁴⁷ This process is supplemented by specialized techniques designed to recover even the most fragile evidence. For example, the method of *flotation*, used to great effect at sites like Tell Abu Hureyra, involves taking soil samples and using water to separate light organic materials (like seeds and charcoal) from the heavier soil matrix. This technique has been instrumental in recovering direct evidence of the earliest cultivated plants, providing crucial data on the origins of agriculture.⁹

In recent decades, this traditional approach has been revolutionized by a suite of non-invasive, remote-sensing technologies that allow archaeologists to study tells at a landscape scale before a single trench is dug.⁴⁸ This methodological shift represents a new paradigm in the field. Where early archaeology was often limited to the localized view from a single excavation pit, modern research begins with a "big picture" perspective.

High-resolution satellite imagery, including declassified Cold War-era CORONA photographs and modern commercial satellite data, enables the identification and mapping of tells and their associated features—such as ancient roads, canals, or field systems—over vast areas.²

This satellite data can be integrated into a Geographic Information System (GIS) for more sophisticated analysis. For instance, a Topographic Position Index (TPI) is a computational tool that can automatically identify potential tell sites across a landscape by searching for pixels that are significantly higher in elevation than their immediate surroundings.² For

higher-resolution mapping, LiDAR (Light Detection and Ranging) technology, often deployed from aircraft or drones, uses laser pulses to create incredibly detailed digital elevation models of the ground surface. LiDAR can effectively "see" through vegetation cover, revealing subtle archaeological features like buried walls or earthworks that are invisible to the naked eye.⁴⁹

On the ground, geophysical techniques like ground-penetrating radar (GPR) and electrical resistivity surveys can be used to map subsurface anomalies, giving archaeologists a virtual picture of buried architecture before they begin to excavate.⁵⁰ This integrated, multi-scalar approach is more efficient, less destructive, and allows researchers to formulate more precise research questions, shifting the focus from the single artifact to the entire settlement system.

Archives of Civilization: Contributions to Understanding the Past

The unique structure of tells makes them invaluable archives for studying long-term, or *diachronic*, change. Because they contain a more-or-less continuous sequence of occupation at a single location, they allow archaeologists to observe major historical processes as they unfolded over centuries or millennia.¹³ This diachronic perspective has yielded profound insights into pivotal moments in human history.

The study of tells has been central to understanding the Neolithic Revolution. Sites like Tell Abu Hureyra in Syria provide a nearly continuous record spanning the transition from the Epipaleolithic to the Neolithic. The layers of this tell document a community shifting from a reliance on hunting and gathering to the systematic cultivation of cereals like rye, providing some of the earliest direct evidence for the origins of farming in the world.⁹

Tells are also at the heart of the archaeology of early urbanism.⁵¹ The traditional narrative of urban origins, centered on southern Mesopotamia, has been fundamentally revised by evidence from northern Mesopotamian tells like Tell Brak. The deep stratigraphy at Brak demonstrates that a complex, urban-scale society developed there indigenously, challenging the model of urbanism as a concept that simply diffused from the south.⁶ By excavating the layers of these ancient cities, archaeologists can trace the development of urban planning, the emergence of social stratification, the construction of monumental architecture, and the formation of the complex social and political institutions that define urban life.⁵³

The scientific contribution of tells extends beyond archaeology and history into the broader social and environmental sciences. Because their layers contain a wealth of paleoenvironmental data—such as pollen, seeds, and animal bones—they serve as detailed records of past climates and landscapes.⁴¹ By correlating this environmental data with the cultural material from the same layers, archaeologists can study how human societies were affected by and adapted to long-term climate change. In this sense, tells function as unique, long-running societal experiments. They provide datasets spanning millennia, allowing researchers to test theories from fields like sociology, economics, and sustainability science about what makes societies resilient, how inequality develops over time, and why civilizations ultimately collapse or transform.⁵¹ Tells are thus not just records of the past; they are laboratories for understanding the deep historical roots of the challenges facing human societies today.

Conclusion: The Enduring Legacy of City Mounds

The formation of archaeological tells is a remarkable and complex phenomenon, an emergent property arising from the dynamic and sustained interplay of material technology, environmental opportunity, and cultural choice. These artificial mounds are not simple accumulations of dirt but are instead structured, stratified archives of human history, built by the very act of living. The process begins with a specific technological choice—the reliance on sun-dried mudbrick, an economical but impermanent building material. This choice sets in motion a relentless cycle of construction, decay, and rebuilding that serves as the physical engine of the tell's vertical growth.

However, this mechanical process was only able to unfold because of powerful forces that anchored communities to a single location for millennia. These anchors were both practical and profound. Settlers were drawn to strategic locations with access to vital resources like water, fertile land, and trade routes. Yet, it was the intangible bonds of culture and ritual that truly cemented their place. The practice of burying the dead within the home transformed a simple dwelling into a sacred ancestral locus, making abandonment a profound spiritual rupture. Over time, the growing mound itself became a monument to a community's lineage and endurance, a physical manifestation of their history and identity written upon the landscape.

The study of these city mounds, through a combination of meticulous excavation and

advanced remote sensing, has yielded some of the most important insights in modern archaeology. Tells have provided an unparalleled record of the great transformations of human society, from the dawn of agriculture and the first stirrings of settled life to the complex processes of urbanization and the rise of the world's first cities. They are unique laboratories for studying long-term social dynamics and the intricate relationship between human societies and their environments over thousands of years.

Today, these irreplaceable archives of the human journey face unprecedented threats. In regions like Syria and Iraq, the decade-long civil war and the actions of groups like ISIL have led to the catastrophic destruction of countless sites through deliberate demolition, military encroachment, and industrial-scale looting.² Elsewhere, rapid agricultural development and urban sprawl continue to level these ancient mounds, erasing their records forever. The enduring legacy of tells is therefore a dual one. They are monuments to the resilience and ingenuity of past civilizations, and they are a stark reminder of the fragility of cultural heritage in the modern world. Their ongoing study and preservation remain a critical task, for in their layers of earth and debris lies the story of who we were, and a deep well of knowledge for understanding who we are today.

Works Cited

1. ¹ Wikipedia. "Tell (archaeology)."
2. ¹⁵ Bidmead, J. "Some Archaeological Definitions." Chapman University.
3. ¹¹ Wikipedia. "Göbekli Tepe."
4. ¹² Nalewicki, J. "Göbekli Tepe: The Mysterious Site Older Than Stonehenge." History.com.
5. ³⁵ Fiveable. "Göbekli Tepe."
6. ⁴ Wikipedia. "Çatalhöyük."
7. ¹⁰ Wikipedia. "Çadır Höyük."
8. ⁵⁵ University of Liverpool. "The Boncuklu Project - REF 2021 Case Study."
9. ² StoryMaps ArcGIS. "What's a 'tell'?"
10. ¹³ Dueppen, S. A., & LeCount, L. J. "Understanding Archaeological Tells: Circulating Memories and Engaging with Ancestors through Material Attachments." *Cambridge Archaeological Journal*.
11. ¹⁴ Körös Regional Archaeological Project. "Neolithic Tells." University of Illinois Chicago.
12. ²⁰ Reddit. r/AskAnthropology. "How are tells formed? (large mounds of debris from successive occupations and buildings)."
13. ²¹ Emery, V. L. "Mud-Brick Architecture." *UCLA Encyclopedia of Egyptology*.
14. ²⁴ BibleWalks.com. "Mud Bricks."
15. ¹⁸ Braun, E. "Tel Gezer is an accumulation of the debris of human activity on a natural hill." ResearchGate.

16. ⁹ Wikipedia. "Tell Abu Hureyra."
17. ¹⁹ The Ness of Brodgar Project. "Midden."
18. ¹⁶ University of South Alabama. "Stratigraphy."
19. ¹⁷ The Montpelier Foundation. "Stratigraphy and the Pine Alley."
20. ⁵⁶ Far Horizons Archaeological and Cultural Trips. "The Top 10 Archaeological Sites in the World."
21. ³⁶ History Hit. "Catalhoyuk."
22. ²⁸ Çatalhöyük Research Project. "The Rise and Fall of a Neolithic Town."
23. ⁸ UNESCO World Heritage Centre. "Ancient Jericho/Tell es-Sultan."
24. ⁷ Wikipedia. "Jericho."
25. ²⁷ Khan Academy. "Jericho."
26. ³ Oates, J. "Tell Brak: The 4th Millennium."
Proceedings of the British Academy.
27. ²⁹ McDonald Institute for Archaeological Research. "Tell Brak."
28. ⁵ Wikipedia. "Tell Brak."
29. ⁴³ Wisconsin Department of Natural Resources. "Mounds."
30. ⁴⁵ Wikipedia. "Earthworks (archaeology)."
31. ⁴⁴ Wikipedia. "Mound Builders."
32. ⁴² Wikipedia. "Mound."
33. ⁴⁶ Saint Paul Historical. "Indian Mounds Park."
34. ⁴⁷ Society for American Archaeology. "What Do Archaeologists Do?"
35. ⁵⁰ Mississippi Valley Archaeology Center. "Locating Sites."
36. ⁵⁷ Anfinset, N., & Salem, H. "Tell et-Tell: An ancient city in a modern world." YouTube.
37. ³⁰ Quizlet. "5 themes of geography Flash Cards."
38. ²³ Emery, V. L. "Mud-Brick Architecture." eScholarship, University of California.
39. ²⁶ CityChangers.org. "Mud Fact File."
40. ²⁵ Biblical Archaeology Society. "How to Make a Mudbrick."
41. ⁵⁸ Fathy, H. "Vault and Dome Construction."
East-East.
42. ²² Wikipedia. "Mudbrick."
43. ⁸ UNESCO World Heritage Centre. "Ancient Jericho/Tell es-Sultan." (Detailed description)
44. ⁷ Wikipedia. "Jericho." (Detailed description)
45. ⁴⁰ Encyclopaedia Britannica. "Walls of Jericho."
46. ³¹ Durham University. "Inhabitants of Ancient Jericho."
47. ⁵⁹ Armstrong Institute of Biblical Archaeology. "Uncovering the Bible's Buried Cities: Jericho."
48. ²⁹ McDonald Institute for Archaeological Research. "Tell Brak." (Detailed description)
49. ⁶ Ur, J. "Urban Origins at Tell Brak, NE Syria (2003-2006)." Harvard University.

50. ³⁴ Learning Sites, Inc. "Tell Brak, ancient Nagar."
51. ⁵ Wikipedia. "Tell Brak." (Detailed description)
52. ⁴¹ Hirst, K. Kris. "Tell Brak - Mesopotamian Capital in Syria." ThoughtCo.
53. ⁵¹ Smith, M. E., & Peregrine, P. N. "The Archaeology of Early Cities: What Is the City but the People?"
Annual Review of Anthropology.
54. ⁵² Smith, M. E., & Peregrine, P. N. "The Archaeology of Early Cities: What Is the City but the People." ResearchGate.
55. ⁵³ Smith, M. E. "How do archaeologists study early urban life? Institutions, generative processes, and urban order."
Discover Cities.
56. ³⁷ Ur, J. A., Karsgaard, P., & Oates, J. "The 2003–2006 Tell Brak Suburban Survey."
Tell Brak I: The Uruk-period platforms and their setting.
57. ⁵⁴ Cowgill, G. L. "Origins and Development of Urbanism: Archaeological Perspectives."
Annual Review of Anthropology.
58. ⁶⁰ National Geographic. "Lost Treasures of Egypt." YouTube.
59. ⁴⁸ National Geographic. "Space Archaeology." YouTube.
60. ¹³ Dueppen, S. A., & LeCount, L. J. "Understanding Archaeological Tells..."
Cambridge Archaeological Journal. (Detailed description)
61. ⁶¹ National Geographic. "Protecting a Sacred Site from an Uncertain Future." YouTube.
62. ⁴⁹ National Geographic. "Investigating an Ancient Temple | Lost Cities with Albert Lin." YouTube.
63. ³⁸ Hirst, K. Kris. "Çatalhöyük: Life in Turkey 9,000 Years Ago." ThoughtCo.
64. ³² UNESCO World Heritage Centre. "Neolithic Site of Çatalhöyük."
65. ³³ Smarthistory. "Çatalhöyük."
66. ³⁹ Çatalhöyük Research Project. "Çatalhöyük." (Book export)
67. ⁶² Bocaeye, E. "Growth and development of the immature human skeleton from the Neolithic site of Çatalhöyük, Turkey." University College London.
68. ³ Oates, J. "Tell Brak: The 4th Millennium."
Proceedings of the British Academy. (Detailed description)

Works cited

1. Tell (archaeology) - Wikipedia, accessed July 29, 2025,
[https://en.wikipedia.org/wiki/Tell_\(archaeology\)](https://en.wikipedia.org/wiki/Tell_(archaeology))
2. Tells, Mounds, Höyüks, and Tepes - ArcGIS StoryMaps, accessed July 29, 2025,
<https://storymaps.arcgis.com/stories/02347ecb00d34a32a6fba5167ce91981>
3. Archaeology in Mesopotamia: Digging Deeper at Tell Brak - The British Academy, accessed July 29, 2025,
<https://www.thebritishacademy.ac.uk/documents/2009/pba131p001.pdf>
4. Çatalhöyük - Wikipedia, accessed July 29, 2025,
<https://en.wikipedia.org/wiki/%C3%87atalh%C3%B6y%C3%BCk>

5. Tell Brak - Wikipedia, accessed July 29, 2025, https://en.wikipedia.org/wiki/Tell_Brak
6. Tell Brak (Syria) | Jason Ur, accessed July 29, 2025, <https://jasonur.scholars.harvard.edu/pages/tell-brak>
7. Jericho - Wikipedia, accessed July 29, 2025, <https://en.wikipedia.org/wiki/Jericho>
8. Ancient Jericho/Tell es-Sultan - UNESCO World Heritage Centre, accessed July 29, 2025, <https://whc.unesco.org/en/list/1687/>
9. Tell Abu Hureyra - Wikipedia, accessed July 29, 2025, https://en.wikipedia.org/wiki/Tell_Abu_Hureyra
10. Çadır Höyük - Wikipedia, accessed July 29, 2025, https://en.wikipedia.org/wiki/%C3%87ad%C4%B1r_H%C3%B6y%C3%BCk
11. Göbekli Tepe - Wikipedia, accessed July 29, 2025, https://en.wikipedia.org/wiki/G%C3%B6bekli_Tepe
12. Göbekli Tepe: The Mysterious Site Older Than Stonehenge - History.com, accessed July 29, 2025, <https://www.history.com/articles/gobekli-tepe>
13. Understanding Archaeological Tells: Circulating Memories and ..., accessed July 29, 2025, <https://www.cambridge.org/core/journals/cambridge-archaeological-journal/article/understanding-archaeological-tells-circulating-memories-and-engaging-with-ancestors-through-material-attachments/CE85D6CCFA8607F41E99E152FBC88518>
14. Neolithic Tells - Körös Regional Archaeological Project - University of Illinois Chicago, accessed July 29, 2025, <https://koros.uic.edu/our-research/neolithic-tells/>
15. tel, accessed July 29, 2025, <http://www1.chapman.edu/~bidmead/G-tel.htm>
16. The Archaeologist's Toolkit: What is Stratigraphy? | Center for ..., accessed July 29, 2025, <https://www.southalabama.edu/org/archaeology/news/stratigraphy.html>
17. Stratigraphy and The Pine Alley - James Madison's Montpelier, accessed July 29, 2025, <https://www.montpelier.org/stratigraphy-and-the-pine-alley/>
18. Tel Gezer is an accumulation of the debris of human activity on a... - ResearchGate, accessed July 29, 2025, https://www.researchgate.net/figure/Tel-Gezer-is-an-accumulation-of-the-debris-of-human-activity-on-a-natural-hill-with_fig4_301324749
19. Midden - The Ness of Brodgar Project, accessed July 29, 2025, <https://www.nessofbrodgar.co.uk/about/midden/>
20. How are tells formed? (large mounds of debris from successive occupations and buildings) : r/AskAnthropology - Reddit, accessed July 29, 2025, https://www.reddit.com/r/AskAnthropology/comments/fbnmhp/how_are_tells_for_med_large_mounds_of_debris_from/
21. Mud-Brick Architecture - eScholarship.org, accessed July 29, 2025, <https://escholarship.org/uc/item/4983w678>
22. Mudbrick - Wikipedia, accessed July 29, 2025, <https://en.wikipedia.org/wiki/Mudbrick>
23. Mud-Brick Architecture - eScholarship.org, accessed July 29, 2025, https://escholarship.org/content/qt4983w678/qt4983w678_noSplash_1d997407f6

[e69ab48f6c105e2790893c.pdf](#)

24. Mud Bricks - BibleWalks 500+ sites, accessed July 29, 2025, <https://www.biblewalks.com/mudbricks/>
25. How to Make a Mudbrick - Biblical Archaeology Society, accessed July 29, 2025, <https://www.biblicalarchaeology.org/daily/ancient-cultures/daily-life-and-practice/how-to-make-a-mudbrick/>
26. Mud: All You Need To Know Fact File | CityChangers.org, accessed July 29, 2025, <https://citychangers.org/mud-fact-file/>
27. Jericho (article) | Neolithic sites | Khan Academy, accessed July 29, 2025, <https://www.khanacademy.org/humanities/prehistoric-art/neolithicart/neolithic-sites/a/jericho>
28. The Rise and Fall of a Neolithic Town | Çatalhöyük Research Project, accessed July 29, 2025, https://www.catalhoyuk.com/site/rise_and_fall_of_a_neolithic_town
29. Tell Brak Home, accessed July 29, 2025, <https://www.tellbrak.mcdonald.cam.ac.uk/>
30. 5 Themes of Geography Flashcards - Quizlet, accessed July 29, 2025, <https://quizlet.com/522821574/5-themes-of-geography-flash-cards/>
31. Jericho: An Ancient City Revealed - Durham University, accessed July 29, 2025, <https://stories.durham.ac.uk/jericho/>
32. Neolithic Site of Çatalhöyük - UNESCO World Heritage Centre, accessed July 29, 2025, <https://whc.unesco.org/en/list/1405/>
33. Çatalhöyük - Smarthistory, accessed July 29, 2025, <https://smarthistory.org/catalhoyuk/>
34. Tell Brak Homepage - Learning Sites, accessed July 29, 2025, https://www.learningsites.com/Brak/Tell-Brak_home_2016.php
35. Göbekli tepe - (Intro to Archaeology) - Vocab, Definition, Explanations | Fiveable, accessed July 29, 2025, <https://library.fiveable.me/key-terms/introduction-archaeology/gobekli-tepe>
36. Catalhoyuk - History and Facts, accessed July 29, 2025, <https://www.historyhit.com/locations/catalhoyuk/>
37. The Spatial Dimensions of Early Mesopotamian ... - DASH (Harvard), accessed July 29, 2025, <https://dash.harvard.edu/bitstreams/7312037c-9044-6bd4-e053-0100007fdf3b/download>
38. Catalhoyuk: Urban Life in Neolithic Anatolia - ThoughtCo, accessed July 29, 2025, <https://www.thoughtco.com/catalhoyuk-turkey-167405>
39. The Site - Çatalhöyük Research Project, accessed July 29, 2025, <https://www.catalhoyuk.com/book/export/html/54>
40. Walls of Jericho | Archaeology, History, & Significance | Britannica, accessed July 29, 2025, <https://www.britannica.com/place/walls-of-Jericho>
41. Tell Brak - Mesopotamian Capital in Syria - ThoughtCo, accessed July 29, 2025, <https://www.thoughtco.com/tell-brak-mesopotamian-capital-syria-170274>
42. Mound - Wikipedia, accessed July 29, 2025, <https://en.wikipedia.org/wiki/Mound>
43. Burial Mounds - Wisconsin DNR, accessed July 29, 2025, <https://dnr.wisconsin.gov/topic/Lands/CulturalRes/mounds>

44. Mound Builders - Wikipedia, accessed July 29, 2025,
https://en.wikipedia.org/wiki/Mound_Builders
45. Earthworks (archaeology) - Wikipedia, accessed July 29, 2025,
[https://en.wikipedia.org/wiki/Earthworks_\(archaeology\)](https://en.wikipedia.org/wiki/Earthworks_(archaeology))
46. What is Known About the Indian Mounds? - Saint Paul Historical, accessed July 29, 2025, <https://saintpaulhistorical.com/items/show/184>
47. What do Archaeologists do - Society for American Archaeology, accessed July 29, 2025, <https://www.saa.org/about-archaeology/what-do-archaeologists-do>
48. Space Archaeology: A New Frontier of Exploration | National Geographic - YouTube, accessed July 29, 2025,
<https://www.youtube.com/watch?v=gxD32LRC1QE>
49. Investigating an Ancient Temple | Lost Cities with Albert Lin - YouTube, accessed July 29, 2025, <https://www.youtube.com/watch?v=dGD06Mpi45M>
50. Locating Sites - Process of Archaeology - UW-La Crosse, accessed July 29, 2025,
<https://www.uwlax.edu/mvac/process-of-archaeology/fieldwork/locating-sites/>
51. The Archaeology of Early Cities: "What Is the City but the People?" - Annual Reviews, accessed July 29, 2025,
<https://www.annualreviews.org/content/journals/10.1146/annurev-anthro-041222-094823?crawler=true&mimetype=application/pdf>
52. The Archaeology of Early Cities: "What Is the City but the People?" - ResearchGate, accessed July 29, 2025,
https://www.researchgate.net/publication/385105861_The_Archaeology_of_Early_Cities_What_Is_the_City_but_the_People
53. (PDF) How do archaeologists study early urban life? Institutions, generative processes, and urban order - ResearchGate, accessed July 29, 2025,
https://www.researchgate.net/publication/386002338_How_do_archaeologists_study_early_urban_life_Institutions_generative_processes_and_urban_order
54. ORIGINS AND DEVELOPMENT OF URBANISM: Archaeological ..., accessed July 29, 2025,
<https://faculty.washington.edu/plape/citiesaut11/readings/Cowgill%20annurev%252Eanthro%252E32%252E061002%252E093248.pdf>
55. The Boncuklu Project | Department of Archaeology, Classics and Egyptology | University of Liverpool, accessed July 29, 2025,
<https://www.liverpool.ac.uk/archaeology-classics-and-egyptology/research/impact/boncuklu-project/>
56. Top 10 Archaeological Sites in the World - Far Horizons, accessed July 29, 2025,
<https://www.farhorizons.com/the-top-10-archaeological-sites-in-the-world/>
57. UNDERSTANDING ET-TELL AS HERITAGE IN A PAST AND PRESENT URBAN LANDSCAPE - YouTube, accessed July 29, 2025,
<https://www.youtube.com/watch?v=Mh8iO1L9OHQ>
58. The Mud Brick Manual - EastEast, accessed July 29, 2025,
<https://easteast.world/posts/453>
59. Uncovering the Bible's Buried Cities: Jericho | ArmstrongInstitute.org, accessed July 29, 2025,
<https://armstronginstitute.org/309-uncovering-the-bibles-buried-cities-jericho>

60. Lost Treasures of Egypt: Unearthing Ancient Secrets | MEGA EPISODE - YouTube, accessed July 29, 2025, <https://www.youtube.com/watch?v=imyUnXoz538>
61. How 3-D Imaging Helps Archaeologists Preserve the Past | National Geographic - YouTube, accessed July 29, 2025, <https://www.youtube.com/watch?v=aVB6ocNBhTM>
62. Childhood growth in the Neolithic: a detailed case study of Çatalhöyük - UCL Discovery, accessed July 29, 2025, <https://discovery.ucl.ac.uk/1465837/6/PhD-Emmy-27-03-2015.pdf>