

# Deposition Story 1

## Introduction

During the Eocene Epoch, from about 56 million to 34 million years ago, the planet's temperature was warm. There was heavy rainfall and no glaciers. The sea level was relatively high, and much of Texas was underwater, including the location of your strata. In your location, sand was deposited on the shoreline and buried by other sediment.

Over time, the sand is compacted and cemented to form sandstone, a sedimentary rock. The sandstone was once covered by other rocks and sediments, but erosion over time exposed the sandstone once again.

## READ

Over time, the exposed sandstone is weathered by water, wind, and other factors, leaving the rock cracked and broken into smaller pieces. Living things, like fungi and moss, can begin growing in the weathered material and the cracks in the rock. As more vegetation grows and decomposes, the rock and sediment are weathered more. As more time passes, soil has formed, in which grasses, shrubs, and trees are growing.

As people begin living in the area, they hunt small game, such as rabbits and squirrels. They also gather marine animals, such as mussels and snails, from the nearby river. Many edible plants are available as well, like pecans and prickly pears.

## DO

Deposit a layer of sediment that's between 0.5in – 0.75in thick. Within the sediment layer, bury one **shell**, one **rabbit**, and one **acorn**. Be sure the artifacts are completely covered!

### ARTIFACTS



**READ**

After consistent heavy rainfall, the nearby river overflows and floods the area multiple times. The traveling water deposits a layer of sand and silt, burying the soil and objects left behind.

The plants in the area are frequently waterlogged, causing many of them to die. The area is abandoned by the people who had been there; therefore, no objects are deposited in this stratum.

**DO**

Deposit a layer of sediment that's between 0.5in – 0.75in thick. Be sure it is a different color than the previous layer! No artifacts are deposited.

**ARTIFACTS**

No artifacts are deposited.

**READ**

Following the period of frequent flooding, rainfall returns to normal, and vegetation can grow again in the area. With more and more plants growing and decomposing, a new soil forms.

With the return of vegetation and animals to hunt, people return to the area. Using bows and arrows, they hunt large game like bison and deer. Mussels and snails are collected from the river. Pecans and prickly pear cacti are still main food sources, along with mesquite beans. Pottery is made from clay found near the river.

**DO**

Deposit a layer of sediment that's between 0.5in – 0.75in thick. Be sure it is a different color than the previous layers! Bury one **clay jug**, one **bison**, and one **arrowhead** within the sediment layer. Be sure the artifacts are completely covered!

**ARTIFACTS**

**READ**

After a period of frequent flooding, the area experiences a long, severe drought. Without as much vegetation, erosion by wind increases, causing sediment to be transported and deposited.

With the arrival of Europeans, come new trade goods, animals, and plants. People still hunt deer and other wildlife, but bison no longer visit the area. Horses are brought to the area by colonists, which are used for transportation. Some trade goods used in the area are porcelain dishes and metal eating utensils, as well as weapons like muskets and cannons.

**DO**

Deposit a layer of sediment that's between 0.5in – 0.75in thick. Be sure it is a different color than the previous layer! Bury one **porcelain plate**, one **horseshoe**, and one **clay marble** within the sediment layer. Be sure the artifacts are completely covered!

**ARTIFACTS**

# Deposition Story 2

## Introduction

During the Cretaceous Period, between about 146 and 66 million years ago, the Earth's climate was warm, sea level was high, and dinosaurs still roamed the earth. Most of Texas was underwater, beneath what is called the Western Interior Seaway. This shallow sea divided North America, running from the Arctic Ocean all the way to the Gulf of Mexico. Teeming with life, a variety of animals lived in the Western Interior Sea, including mosasaurs and sharks. Also abundant were many creatures with calcium carbonate shells and skeletons, like mollusks and coral.

When these organisms died and sank to the seafloor, their shells and skeletons were broken down into small pieces, buried, and compacted to form limestone rock. Other rock and sediment layers buried this limestone, but over time they eroded, leaving the limestone layer at the surface.

Staple Here

## READ

After heavy rainfall, the nearby river overflows and floods the area. The traveling water deposits a layer of sand and silt, burying the bedrock.

No people have been through this area; therefore, no artifacts have been left behind.

## DO

Deposit a layer of sediment that's between 0.5in – 0.75in thick. No artifacts are deposited.

### ARTIFACTS

No artifacts are deposited.

Event 1

**READ**

After a period of frequent flooding, the area experiences a drought. Without as much vegetation, erosion by wind increases, causing sediment to be transported from nearby and deposited in this area.

As people begin living in the area, they hunt small game, such as lizards, rabbits, snakes, and squirrels. The nearby river offers mussels and snails for them to gather as well. In addition to animals, plants like agave and buckeye seeds were eaten. As well as its use as food, fibers from agave were used to weave baskets, sandals, and even animal traps.

**DO**

Deposit a layer of sediment that's between 0.5in – 0.75in thick. Be sure it is a different color than the previous layer! Bury one **basket**, one **snake**, and one **agave** within the sediment layer. Be sure the artifacts are completely covered!

**ARTIFACTS****READ**

As the drought comes to an end, the area's climate becomes cooler and wetter. With increased rainfall, plants like sotol, yucca, and grasses become abundant. As more vegetation grows and decomposes, desert soil develops and allows for more grasses to grow.

Bison make their way to the area and are hunted with bows and arrows, along with deer and smaller animals. The prickly pear cactus becomes a significant food source, as the fruit was harvested in late summer and the pads could be eaten year-round. In addition to prickly pear, people harvested the stems of sotol for food, and its leaves were used for weaving baskets and mats.

**DO**

Deposit a layer of sediment that's between 0.5 in– 0.75 in thick. Be sure it is a different color than the previous layers! Bury one **prickly pear**, one **bison**, and one **arrowhead** within the sediment layer. Be sure the artifacts are completely covered!

**ARTIFACTS**

**READ**

The cooler, wetter period comes to an end, bringing in a drier and warmer climate. As some of the vegetation dies, erosion by wind increases again, depositing more sediment in the area.

The arrival of Europeans brings new trade goods, animals, and plants. People still hunt deer and other wildlife, but bison no longer visit the area. Brought to the area by colonists, horses are used for transportation. Trade goods used in the area include porcelain dishes and metal eating utensils, as well as weapons like muskets and cannons.

**DO**

Deposit a layer of sediment that's between 0.5in – 0.75in thick. Be sure it is a different color than the previous layers! Bury one **horseshoe**, one **metal fork**, and one **glass bead necklace** within the sediment layer. Be sure the artifacts are completely covered!

**ARTIFACTS**

# Deposition Story 3

## Introduction

Over 100,000 years ago, the Last Glacial Period began, marked by advancing glaciers, cooler temperatures, and the roaming of mammoths and other megafauna. With much of Earth's water locked in ice, sea levels were over 300 feet lower than they are today, and the Texas shoreline was much farther east. In this area, a dynamic braided river system developed. For thousands of years, this river made its way to the Gulf of Mexico. It experienced numerous flooding events and other changes to its stream channels, depositing large amounts of sediment, like sand, gravel, and clay.

Near the end of this time period, at around 20,000 years ago, average temperatures slowly began to increase, causing many glaciers to start melting. As glaciers retreated, sea level rose, and the Texas shoreline slowly made its way westward.

## READ

With sea level still rising and the shoreline creeping farther inland, the river meets the ocean much closer to your area. A shallow bay forms nearby, and as the river meets the ocean, it deposits sediment. Over time, grasses and other plants can take root as a marsh develops. Soon, the marsh is populated with a variety of flora and fauna.

Periodically, people in the area visit to gather oysters and clams for food and leave shell waste behind. Small amounts of fishing occur and a few bones are left behind.

## DO

Deposit a layer of sediment that's between 0.5in – 0.75in thick. Bury one **clamshell**, one **fish**, and one **crab** in the sediment layer. Be sure the artifacts are completely covered!

### ARTIFACTS



**READ**

A period of rapid sea level rise begins, inundating the area with seawater that deposits silty, muddy sediment. The marsh is submerged by the salty water for long periods of time, cutting the marsh plants off from oxygen and killing them.

With decreased availability of food sources like oysters and clams, people in do not travel to this area and therefore do not leave anything behind.

**DO**

Deposit a layer of sediment that's between 0.5in – 0.75in thick. Be sure it is a different color than the previous layer! No artifacts are deposited.

**ARTIFACTS**

No artifacts are deposited.

**READ**

As sea level decreases again, the shallow bay nearby re-forms. Sediment is deposited in your area both by the river and by the ocean's waves. The marsh ecosystem develops again, serving as a habitat for numerous animals. Among them are marine animals like crustaceans, fish, shellfish, as well as terrestrial animals like coyotes, deer, and rodents. Just north of here, bison can also be found.

Sea level remains stable, and people inhabit the area. They fish extensively, dig for shellfish, and hunt larger game like deer and bison with bows and arrows and spears. Ornaments, like necklaces and beads, are made using shells, and pottery is made from the local clay.

**DO**

Deposit a layer of sediment that's between 0.5in – 0.75in thick. Be sure it is a different color than the previous layers! Bury one **clamshell**, one **bison**, and one **clay jug** within the sediment layer. Be sure the artifacts are completely covered!

**ARTIFACTS**



**READ**

A strong storm hits the area. After heavy rain, the river floods the marsh. Additionally, as high winds push ocean water to the shore, seawater floods the marsh as well. Water from both areas carry large amounts of sediment that deposit over the marshy soil, burying objects left behind. After the high water recedes, a new layer of marsh soil develops as vegetation puts down new roots. The diverse mix of flora and fauna repopulate the area, attracting people to return and resettle.

People who returned to the area still mostly relied on hunting and fishing for sustenance. With the arrival of Europeans, artifacts like musket balls, metal armor and utensils, and glass beads are left behind.

**DO**

Deposit a layer of sediment that's between 0.5in – 0.75in thick. Be sure it is a different color than the previous layers! Bury one **deer**, one **coin**, and one **horseshoe** within the sediment layer. Be sure the artifacts are completely covered!

**ARTIFACTS**