



## Time Travel Quest 12

# Architecture Underground

## The Archaeology of a Building

### August Theme: **Architecture and Construction**

Did you know you can find a building underground? That's right! Just below your feet could be where an old building once stood. That's really amazing! And we can use the science of **archaeology** to get a closer look at these old underground buildings. Archaeology includes the study of things that people made and/or used and then left behind. Sometimes, that means parts of buildings!



▲ Archaeological excavation of the fort at Mission San Luis. Rectangular holes or "units" were dug (ones appearing black are in the blockhouse area and covered with plastic) and white lines show where archaeologists think that the palisade (fence) would have been.

where archaeologists believe people have lived in the past. Some archaeological sites—such as ancient cities with big stone walls—are visible to us above ground. Other buildings are buried deep beneath the ground: they either deteriorated (broke down) over time, or were destroyed by a fire, hurricane, or another event. When that happens, the only clues that they once existed may be underground!

Scientists who study archaeology are called *archaeologists*. They do careful digging underground—called *excavation*—to try to find clues or evidence that will give them information about the past. Archaeologists find many items from the past underground, but sometimes it's not just an individual item. Sometimes they find a whole building! And the archaeologists at Mission San Luis discovered that the Apalachee and the Spanish who lived here long ago constructed many buildings in the village.

But how do they find buildings underground? An archaeologist's work begins with finding a location to study, known as a *site*. A site is



▲ An archaeologist excavating a feature of the Franciscan Church at Mission San Luis.

This is when archaeologists would need to look underground to find evidence — or clues — of structures or items that were once above ground. They need to excavate! An archaeologist digs slowly and carefully using a systematic (organized) method so that nothing found underground is damaged. This is important, because those special clues cannot be replaced! Archaeologists use brushes, picks, trowels, knives, and other tools in their work. They attempt to uncover things that people have made — such as pottery, weapons, jewelry, tools, etc. Items like these are called **artifacts**. But sometimes the clues lead them to find something bigger — like a whole building!

**Below are some examples of archaeological evidence used to identify some of the buildings here at Mission San Luis, as well as what that evidence means:**

ITEM FOUND UNDERGROUND	WHAT IT MIGHT REPRESENT	WHAT DOES THIS TELL US?
<b>Post-mold “features”</b>	What is left behind by a wooden building frame or posts: often a dark stain in the dirt	A building held together by wood posts/ frame was once located there
<b>Daub</b> (hardened clay) with impressions of posts or beams	The remains of the material that covered a wall; you can tell because you can see where the daub was once pressed onto the wooden building post	Daub was used as a building material around posts; that could mean the wall of a building once stood on that location
<b>Nails</b>	A clue about what was used to hold the parts of a building together	Nails could have been used to hold together roofs or walls. This also suggests a blacksmith may have been on site!
<b>Hinge</b>	An item used to open or close a door, window, gate, or lid	This building has a door, window, gate, or furniture that opens and closes
<b>Key</b>	Not an actual part of a building, but something that may be used in or for the building	There was once a building, room, gate, or container that needed a key to open it

**By finding and gathering all this information, you can find a whole house underground! Isn’t that amazing?**

## Time Portal: Villagers through Video

We are going to use virtual time travel to talk with one of the villagers of Mission San Luis! Today, the Senior Archaeologist at Mission San will show you how he found buildings underground at Mission San Luis!

**Quest 12 Video Link:** <https://youtu.be/jJq9asS2wK4>

## Quest Questions

Questions can help you focus your journey into the past!

Here are some questions to think about that will help guide you in your exploration:

- What is archaeology?
- What can archaeology help us learn about the past?
- What do archaeologists find that help them learn more about buildings from the past?
- What is an “archaeological feature”?
- What tools does an archaeologist use to excavate a building?

## Post-Mold Mapping Puzzle!

**D**id you know that dark spots/colors in the dirt may mean that a building once stood there? Archaeologists are happy when they find these spots in the ground, because they can learn something from them! These spots can mark the place in the ground where posts once held up an old building. Do you have big posts that hold up the walls of your house? You probably do! Because they mark where posts once were, the spots are called “**post molds**”! You can only see the post molds when the building is no longer there. Maybe the building fell apart over a long period of time. Most buildings don’t last forever!



▲ Excavation of the Chief's House at Mission San Luis. Note the darker spots in the soil where posts and smudge pits once were.

Post molds are not artifacts, but “features”! Features are evidence left in the ground where human activity took place that cannot be moved from the ground – like different colors of dirt made by a building! When simply living on the land, people leave many features in the ground for archaeologists to find. Many of the features found are post molds because people constructed buildings. When archaeologists **excavate** — or carefully expose by digging — many post molds in one area, they know there was once a structure in that location. When they mark all of the post mold locations on a map, they can even see what shape the structure was!

**Game Instructions:** Get ready to become an archaeologist! You and your archaeology team just found a bunch of post molds in the ground at Mission San Luis. That could mean there was a building in that location! But it will be hard to see if the post molds might have been a building by just looking at them in the ground. We need to create a map of all the post molds we find so we can see to if they form the outline of a building when put together!

**Step 1)** Look at the **Post-Mold List** on the next page. Each item on the list represents a different post mold. This tells you what specific area of the ground – or “unit” – each post mold was found in. Units are squares in the ground that archaeologists measure, mark off, and dig in, so they know exactly where everything they find came from.

**Step 2)** Notice that each post mold on the list was found in a different location. For instance, the first post mold was found in the top middle square of Unit 4.

**Step 3)** Can you find the Unit 4 number on the the **Post-Mold Grid** on the next page? We have placed a circle in the top middle square of Unit 4 as an example for you! Now find the next list item (Unit 21) on the grid and mark it with a circle ● where it says to (in the center square).

**Step 4)** Continue marking all of the post molds from the list onto the grid. (Hint: check off each post mold on the Post-Mold List once you have marked it on the grid. That way, you won’t miss any!) See if you start to see a pattern! Together, do the post molds start to form a shape? What building at Mission San Luis do you think made these post molds?

**Step 5)** Once you have marked all of your post molds on the grid, see if you can trace the outline of the shape they make. It's almost like a “connect the dots” game!

(Answer key on page 8)

TOP LEFT	TOP MIDDLE	TOP RIGHT
MIDDLE LEFT	CENTER	MIDDLE RIGHT
BOTTOM LEFT	BOTTOM MIDDLE	BOTTOM RIGHT

Use this **KEY** to mark the squares within each unit 1-64 (mentioned in the list on the next page)



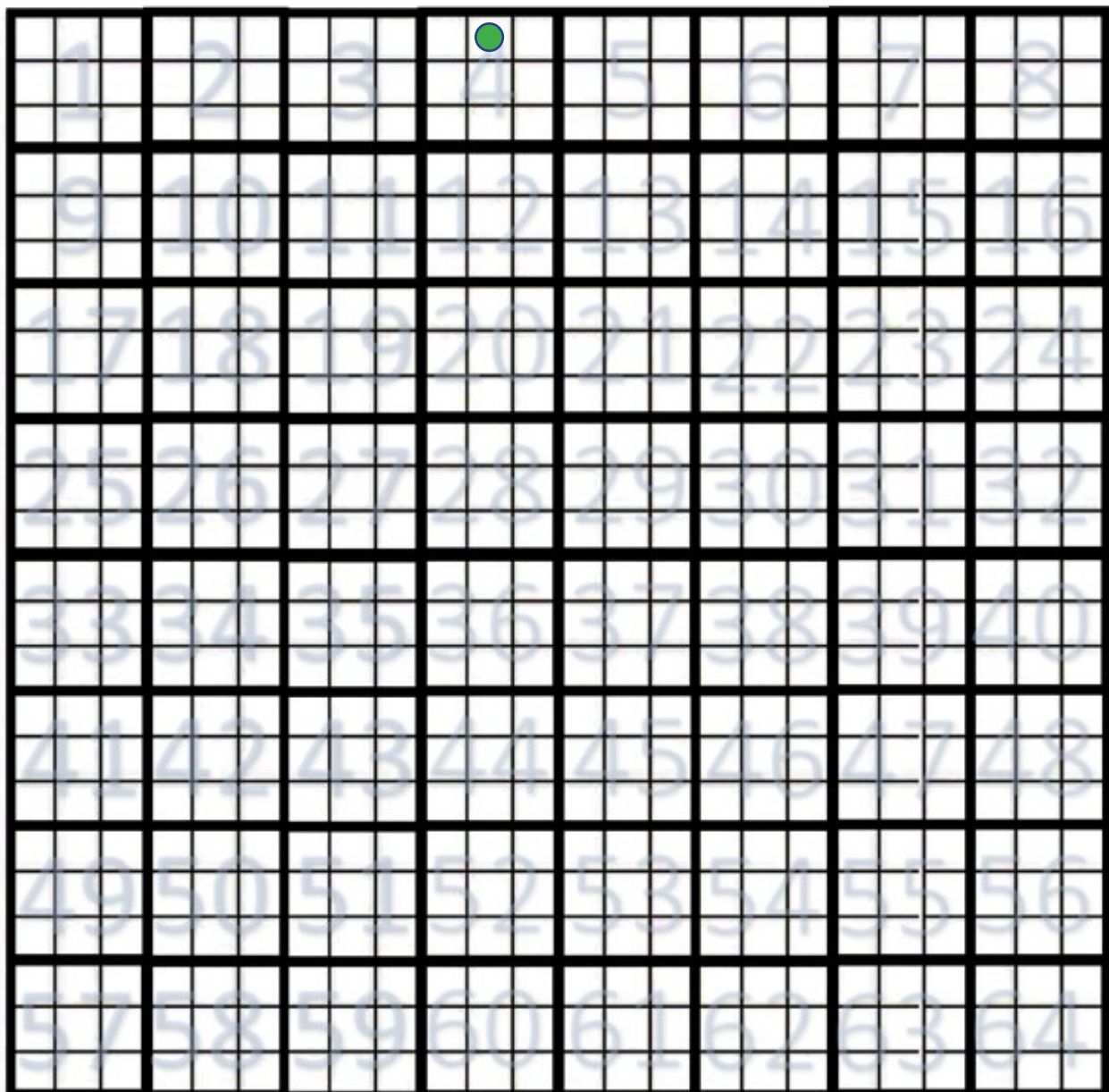
Example of placing circle in top middle square of unit 4



## Post-Mold List

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> <b>Unit 4:</b> top middle square | <input type="checkbox"/> <b>Unit 49:</b> top right square     |
| <input type="checkbox"/> <b>Unit 21:</b> center square               | <input type="checkbox"/> <b>Unit 6:</b> center square         |
| <input type="checkbox"/> <b>Unit 63:</b> top left square             | <input type="checkbox"/> <b>Unit 40:</b> middle right square  |
| <input type="checkbox"/> <b>Unit 41:</b> center square               | <input type="checkbox"/> <b>Unit 62:</b> center square        |
| <input type="checkbox"/> <b>Unit 7:</b> bottom left square           | <input type="checkbox"/> <b>Unit 33:</b> middle left square   |
| <input type="checkbox"/> <b>Unit 27:</b> center square               | <input type="checkbox"/> <b>Unit 9:</b> bottom right square   |
| <input type="checkbox"/> <b>Unit 17:</b> center square               | <input type="checkbox"/> <b>Unit 55:</b> bottom right square  |
| <input type="checkbox"/> <b>Unit 60:</b> bottom middle square        | <input type="checkbox"/> <b>Unit 20:</b> center square        |
| <input type="checkbox"/> <b>Unit 2:</b> bottom right square          | <input type="checkbox"/> <b>Unit 32:</b> middle right square  |
| <input type="checkbox"/> <b>Unit 44:</b> center square               | <input type="checkbox"/> <b>Unit 50:</b> bottom left square   |
| <input type="checkbox"/> <b>Unit 16:</b> bottom left square          | <input type="checkbox"/> <b>Unit 15:</b> top right square     |
| <input type="checkbox"/> <b>Unit 5:</b> top middle square            | <input type="checkbox"/> <b>Unit 30:</b> center square        |
| <input type="checkbox"/> <b>Unit 45:</b> center square               | <input type="checkbox"/> <b>Unit 61:</b> bottom middle square |
| <input type="checkbox"/> <b>Unit 56:</b> top left square             | <input type="checkbox"/> <b>Unit 3:</b> center square         |
| <input type="checkbox"/> <b>Unit 58:</b> top right square            | <input type="checkbox"/> <b>Unit 38:</b> center square        |
| <input type="checkbox"/> <b>Unit 10:</b> top left square             | <input type="checkbox"/> <b>Unit 48:</b> center square        |
| <input type="checkbox"/> <b>Unit 35:</b> center square               | <input type="checkbox"/> <b>Unit 25:</b> middle left square   |
| <input type="checkbox"/> <b>Unit 24:</b> center square               | <input type="checkbox"/> <b>Unit 59:</b> center square        |

## Post-Mold Grid



## Architecture Detective: Put a Building Back Together!

The buildings you see at Mission San Luis today are actually modern, or built fairly recently. But they were made to look like buildings that were here more than 300 years ago! How do we know what the buildings looked like so long ago? We use the science of archaeology (see page 1 for more about archaeology) to find evidence—or clues—about the old buildings at Mission San Luis. Being an archaeologist is like being a detective: you need to look at all the clues before you can figure out where a building was and how it was put together!



▲ Top: reconstructed Spanish House  
Bottom: excavation in the Hispanic village

Some parts of an old house—and some of the items that were in the house—leave evidence behind for archaeologists to find! The items that people from the past left behind – like a piece of jewelry they lost, or a broken pot that they threw away are called **artifacts**! If you find a lot of household artifacts at a certain spot, you can guess that a house might have once stood at that location! Pieces of a building can also be artifacts.

In addition to artifacts, archaeologists also find **features** in the ground (see page 3 to see a description of a feature in the Post-Mold Mapping Puzzle activity). Features sometimes show us where the building was: that is, where the posts and walls of the building were.

### Detective Game:

Let's be archaeological detectives! We need to match some of the archaeological evidence (evidence found underground) of a house with the part of the building that it represents. Study each piece of archaeological evidence in the "Archaeological Evidence Key" below. Each artifact or feature in this key came from a Spanish house at Mission San Luis!\* Notice that each piece of evidence is labeled with a letter (A, B, C, etc.). This is important, because we are going to match each piece of archaeological evidence with the part of the building it represents. Continue to the next page for more instructions.

### Archaeological Evidence Key:

#### Evidence A: Candle Sticks



#### Evidence B: Iron Nails



#### Evidence C: Post Mold

(dark color in the dirt)



**Evidence D: Hinge**



**Evidence E: Wall Trench**

*(dark line in the dirt)*



**Evidence F: Mexican Majolica**

*Plate Sherds (pottery pieces)*



**Evidence G: Lock and Key**



**Evidence H: Daub Pieces**

*(hardened clay)*

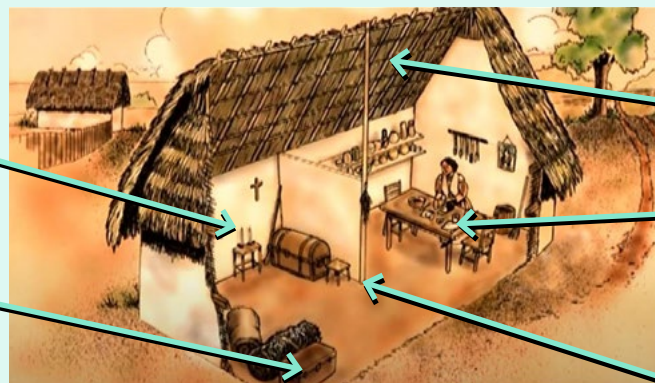


Matching Activity:

Take a look at the drawings [below and on the next page](#). These drawings show what a 17th-century Spanish house at Mission San Luis may have looked like on the inside and outside. Do you see the different parts of the house: the walls, the roof, and the door? Do you see the many items in the house: plates, storage chests, and a table? You can see that some areas of the house—as well as some item items in the house—are labeled.

Review the “Archaeological Evidence Key” [above](#). Each piece of evidence came from a different part of the building! Think about each artifact or feature, and how it may have ended up in the ground. Where did it come from? **Write the correct letter of the archaeological evidence on the line for the part of the house (or item in the house) it came from.** Once you have matched all of the evidence, you will have been able to find most of the house underground!

**Inside View of the House**



**1. Candles**

Evidence \_\_\_\_\_

**2. Wooden Trunk/  
Storage Chest**

*(hint: what item is left behind?)*

Evidence \_\_\_\_\_

**3. Wooden Roof  
Rafters/Beams**

*(hint: what holds them together?)*

Evidence \_\_\_\_\_

**4. Plates/Dishes**

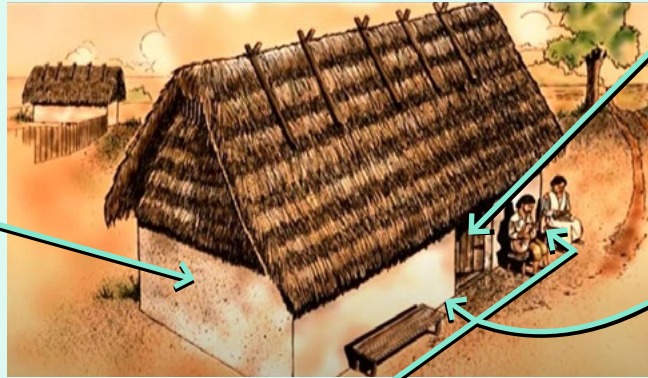
Evidence \_\_\_\_\_

**5. Wooden Post/  
Frame** *(hint: what is left underground?)*

Evidence \_\_\_\_\_



### Outside View of the House



**6. House Wall**  
(hint: what is it made of?)

Evidence \_\_\_\_\_

**7. Door**  
(hint: what item is left behind?)

Evidence \_\_\_\_\_

**8. Side of House**  
(hint: what is left underground?)

Evidence \_\_\_\_\_

(Answer key on page 9)

## Additional Exploration Resources

**Your time travel adventure doesn't stop here!** If you want to learn more about this subject, here are some suggested resources:

- *Mission San Luis de Apalachee: A Teacher's Guide (Illustrated)*  
[https://www.missionsanluis.org/media/1099/01-teachers\\_guide.pdf](https://www.missionsanluis.org/media/1099/01-teachers_guide.pdf)
- *Mission San Luis Archaeology: Collections (Mission San Luis)*  
<https://www.missionsanluis.org/learn/archaeology/artifact-categories/>
- *Archaeologists investigate history of Mission San Luis – Video (Florida State University News)*  
<https://news.fsu.edu/news/arts-humanities/2018/07/12/archaeologists-investigate-history-of-mission-san-luis/>
- *Archaeologists Dig for Clues; Stage 2 Reader (Kate Duke)*  
<https://www.amazon.com/Archaeologists-Clues-Lets-Read-Find-Out-Science/dp/0064451755>
- *FCTV News Episode 17 Mission Nombre de Dios – Video*  
*Discusses excavations on 17th century Mission and Church in St. Augustine (Flagler Collage Television)*  
<https://www.youtube.com/watch?v=IbZIK1dd5dk>

## Virtual Time Traveler Checklist

**Prizes** await your journey's end! For all virtual time travelers who complete four of the weekly summer camp *Time Travel Quests*, your family will receive free admission passes to Mission San Luis Living History Museum for a future visit! Steps to getting your prize are:

- **Complete at least four of the twelve Time Travel Quests** provided between June 15 and August 31, 2020.
- Fill out the *Virtual Time Traveler Checklist* (blank checklists can be found at:  
[http://www.missionsanluis.org/media/1742/virtual-time-traveler-checklist-2020\\_2ue.pdf](http://www.missionsanluis.org/media/1742/virtual-time-traveler-checklist-2020_2ue.pdf)
- Email the checklist to [Rebecca.Woofter@dos.myflorida.com](mailto:Rebecca.Woofter@dos.myflorida.com) or print and mail it to:

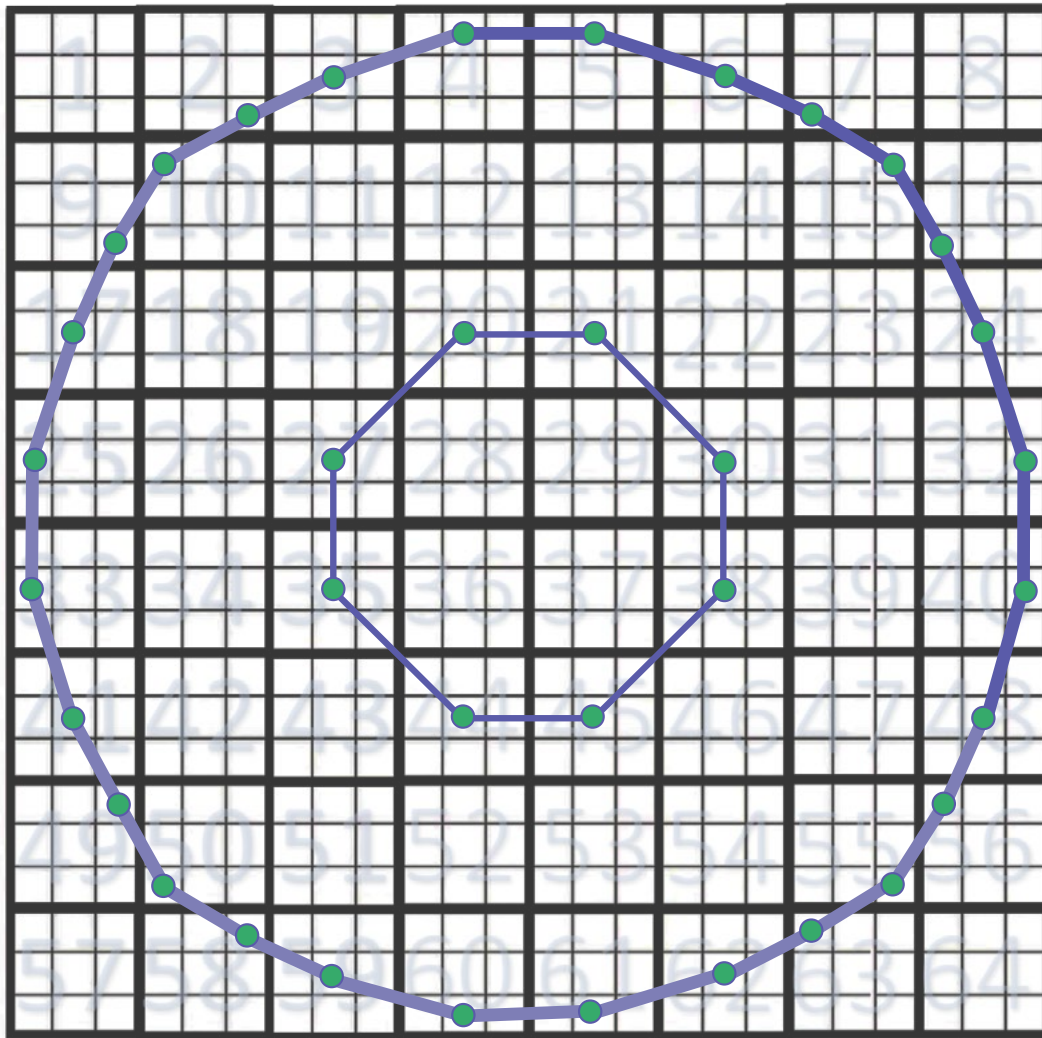
Mission San Luis (c/o Rebecca Woofter)  
2100 West Tennessee Street, Tallahassee, FL 32304

FOR YOUR PRIZE: the **deadline is September 14, 2020** for completing and sending in your 2020 *Virtual Time Traveler Checklist*

### Answer Key (Post-Mold Mapping Puzzle!):

When all the post-mold marks are placed on the grid, can you see the round shape of the Apalachee Council House forming? (NOTE: The Council House actually had more post molds in real life than we are representing in this activity.)

Council House Post Mold Grid (birds-eye view)



Council House (exterior)



Council House (interior)



Note: there is a curved distortion on posts made by the camera lens. Posts are actually straight!



## Answer Key (Architecture Detective Matching Activity)

1. *(Candles)* **Evidence A – Candle Sticks** Finding this artifact might mean that someone in the past used candles to light a building, and needed candle sticks to hold the candles.
2. *(Wooden Trunk/Storage Chest)* **Evidence D – Hinge** This hinge might have been used to keep the lid on a trunk or storage chest: it is the metal part that allows the lid to open and close. Think about what you might have kept in a chest if you lived in a 17th-century house!
3. *(Wooden Roof Rafters/Beams)* **Evidence B – Nails** If you want to make a wooden frame and wooden roof beams for your house, you would probably use nails to hold the wood together.
4. *(Plates/Dishes)* **Evidence F - Mexican Majolica Plate Sherds** These pieces of pottery once made up a whole plate, but it became broken. These pieces might have been from the dishes that a family used to eat dinner! Can you think of a reason that this plate might have been broken in the first place? Do you think the family lost the plate or threw it away?
5. *(Wooden Post/Frame)* **Evidence C - Post Mold** This feature is the dark color in the dirt that is left behind by an old wooden post of a house frame. Most buildings have more than one wooden post in the ground to keep the building standing. So, if we find a lot of post molds in the ground, this might mean that there once was a wooden frame of a building in this location!
6. *(House Wall)* **Evidence H – Daub** Daub (hardened clay) is a material used for building walls. It is what many of the Spanish homes at Mission San Luis were made of. It makes strong walls that keep wind, rain, and animals out of the house!
7. *(Door)* **Evidence G – Lock and Key** Just like today, some people in the 17th-century want to lock their doors. Someone must have lost the lock and key!
- 8: *(Side of House)* **Evidence E – Wall Trench** This feature is the dark-colored line in the dirt that is sometimes left behind where a wall once was. This is like leaving an outline of the wall in the dirt! What do you think it would mean if archaeologists found four wall trenches in the shape of a square? These lines could represent the four walls of a house!

(\*Note: these items are only representative of those excavated at Mission San Luis and may not have actually been found at a Spanish house.)