Spanish Colonial Architecture
A History Alive!
Social Studies Skill Builder style exercise
*Prepared by C. Kelly*

**Intended Grade:** Standard World History, 10th grade

**Subject Areas:** Social Studies and World History

**Correlation to National or Florida Sunshine State Standard:**
SS.A.3.4.... Student understands the significant economic, political, and cultural interactions among peoples of Africa, Europe, Asia, and the Americas during the Age of Discovery and European expansion.

**Performance Standards:**
- Read expository text for information
- Synthesize information
- Work cooperatively in a group
- Create a product

**Objective:**
Students will practice reading comprehension skills in a cooperative learning environment to read, synthesize, and apply critical thinking skills to the factors that influenced the design and construction of Spanish colonial architecture in St. Augustine.

**Approximate Time Required:** 1½ hours

**Materials Required:**
1. *Three Little Pigs* storybook
2. Class set of note taking sheets OR overhead sample for students to recreate
3. Sufficient number of group handout folders of each excerpt (recommend 2 folders of each handout)
4. Teacher stamp/stickers to mark progress on activity
Instructions:

Classroom preparation:
Students should be assigned in groups of 2-4 people of varying skill levels and multi-intelligence strengths. You may choose to have the groups sit at desks or move around the classroom visiting various activity stations. You may also want to arrange desks so that each student can see the projection screen.

Lesson preview activity:
Tell the story of or read the story of the *Three Little Pigs*. Then ask:
- What building materials did each pig use?
- How did they acquire those building materials?
- What environmental danger did the pigs need protection from?
- What environmental danger does your house protect you from?

Review:
Prior lesson on world history themes: Geography, Politics/government, Economics, Society, Culture, Science/Technology (sample graphic organizer enclosure one)

Ask Essential Question:
What factors influenced the way Spanish colonial settlers in St Augustine designed and built their houses?

Distribute/show note taking sheet and review directions:
- Practice good teamwork skills.
- Everyone reads the handouts.
- Together, the group discusses the main ideas in the handout.
- Everyone records his or her original synopsis
- Together, the group discusses the critical thinking questions
- Everyone records his or her original answers to the questions
- ONE person brings all the worksheets to the teacher to be checked.

If the work is satisfactory, teacher stamps each worksheet and gives the runner the next folder.

Process activity/homework:
Create a real estate ad for a Spanish Colonial house. Describe its’ actual location in the town, type of construction materials, and design. Include a sketch of the floor plan. You must use these features: coquina, tabby, gate, shutters, door, garden, kitchen, floor, and hearth.

Online information and illustrations:
http://www.flmnh.ufl.edu/staugustine/intro.htm
Factors Affecting Spanish Colonial Architecture

Read the thematic handouts, then discuss the main ideas. Each student will write an original synthesis for each handout.

Then, discuss the critical thinking questions presented in each handout. Each student will write original answers to the questions.

When complete, submit this worksheet to the teacher.

<table>
<thead>
<tr>
<th>Theme</th>
<th>Synthesis</th>
<th>Critical Thinking answers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geography &amp; Climate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Geography &amp; Natural Resources</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Politics &amp; Government</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Society</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Culture</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Science &amp; Technology</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Geography-Climate's Effect on Architecture

When Pedro Menendez landed in St Augustinewith a charter to establish a new city, he found the climate to be subtropical and humid. Summer sun was intense. The heat and humidity and insect activity rapidly destroyed wooden structures. The territory averaged 51 inches of rain per year, but also suffered periodic droughts. Sometimes violent seasonal thunderstorms pounded the city, lightning activity threatened wildfires. This coastal region was also prone to hurricane activity between June and November. The city's location on the bay front less than a mile from the Atlantic Ocean often provided a cooling breeze.

During the long summers temperatures routinely reached in the upper 90s well into the evening hours. The short winters subjected residents to damp and chill. Temperatures could reach freezing several times in the course of the winter, especially when winds were out of the North.

**Critical thinking question:**

How could you use design a building to protect your family from the extremes of climate?
Geography-Natural Resources

The location of St. Augustine on the Florida peninsula naturally imposed some limitations as to the natural materials available for constructing housing.

The settlers discovered large piles of discarded oyster shells outside Indian villages, as well as thriving oyster beds along the shore.

The countryside offered palm, cedar, cypress, and pine trees, with cedar trees growing near fresh water not far away. Pine was most abundant, but rotted quickly. Both cypress and cedar are rot-resistant. Scrub palmetto, grasses, and vines were also abundant.

Florida's sandy soil, while not fertile, offered building possibilities. So did clay deposits in the salt marshes.

Few if any stones are found in Florida, but in 1586 the settlers did discover a deposit of coquina, a sediment stone formed by the compaction of tiny shells into a coarse but resilient stone. It was not until 1690 that coquina was quarried for use in building the Castillo. The Governor allowed the sale of coquina remnants when the town was being rebuilt after the sack in 1702.

Critical thinking questions:

How could you use these elementary building materials to quickly erect housing to protect your family from danger and the elements?
Politics and Government influence on Architecture

Menendez's charter from King Phillip II included the Ordinances of the Indies, which specified the layout for Spanish Colonial settlement cities. Besides the rules for laying out a central plaza and the location of roads, the Ordinances also included the following:

"133. They shall arrange the building lots and edifices placed thereon in such a manner that the rooms of the latter may enjoy the air of the South and North as these are the best. The building of the houses of the whole town generally shall be of so arranged that they shall serve as a defense against those who may try to disturb or invade the town. Each house in particular shall be so built that they may keep therein their horses and work animals, and shall have yards and corrals as large as possible for health and cleanliness.

134. They shall try also far as possible to have the buildings all on one form for the sake of the beauty of the town."

To develop his towns into full-fledged municipalities, he set up councils, or cabildos, with the power to collect taxes and distribute lots (Waterbury, 1983 – See map).

Critical thinking questions:

How did the government rules effect the individual home builder?
Society's Influence on Architecture

The soldiers and other settlers who accompanied Menendez expected to recreate their life in Spain, including their diet, class structure, dress, and housing styles.

The Spanish placed the front walls of buildings directly on the front lot line, effectively creating a continuous wall defining public and private spaces. Fences enclose the rest of the property. The rear of the lot was used for small gardens, fruit trees and outbuildings. The Spanish house was entered by passing through a gate in the street-side wall into a side yard, and subsequently from the side yard into the house. Window to the street were protected with wooden gratings to permit protected conversation between the house and the street. Windows where not glazed with glass but had wooden shutters that could be closed to keep out weather, insects or enemies. Exterior doors opened inward so they could be barred against invasions. Kitchens were most often in separate building. The Spanish stove had no chimney and smoke from the charcoal fire found its way out through the roof or smoke holes. Heating was provided by charcoal braziers carried from room to room; there were no fire places.

Critical thinking questions:

How do traditional Spanish homes differ from the housing you are used to?
Cultural Art-Architecture

The houses were still nothing special-half-timbered structures of wattle and daub with cypress supports and straw or palmetto thatch.” (Waterbury, 1983)

The one or two celled plan is so widely used all over the world that we should be surprised only if it were NOT found in St Augustine. The prototype is the rectangular one-room cottage of the medieval laborer, a shelter that provided only the necessities: a roof to keep off the rain; walls to stop the wind; a hearth for cooking; and perhaps a ladder to a sleeping loft.

Two rooms were about all most householder would claim, but whenever possible that core was added on to-another room: a loggia, preferably on the sunny south side or a second story when there was enough money to buy the increasingly scarce wood. An added balcony could mean still another room, for it served as a resting place, a storeroom, a place to dry clothes out of the rain.

Critical thinking question:

How might the ideas about housing that people brought from Spain make adapting to a new environment more difficult?
Economics

Economics affected a homeowner’s choice of building materials and the size of the house. Most residents of Spanish colonial St Augustine were soldiers stationed at the Castillo. They were paid irregularly by the Governor, dependent on the arrival of supply ships. Most of them had secondary trade or artisan skills that could earn extra pay when off duty.

Following Drake’s burning of the town in 1702, the government offered aid to enable householders to regain or even surpass his pre-1702 status. The assistance touched almost every family in St. Augustine, because the Governor used government personnel to obtain the materials that people needed for building. Financial aid in response to citizens claims, though slow, was of great importance. Quite likely, the government also furnished technical help in the form of royal engineers, construction superintendents, and master builders in various trades.

In 1702, after working for many years to build the Castillo of coquina, the Governor made scrap coquina blocks available for sale to townspeople.

Critical thinking question:

If you were a Castillo soldier, what kind and size of house would you most likely build?
Science/Technology and Architecture

Early Spanish carpenters had limited tools available for construction. The first homes were probably built using a wattle and daub style of construction using the plentiful native plants, with the addition of a palmetto thatched roof.

After 1690, pit saws produces roughly sawn boards suitable for housing. The Spanish also learned how to quarry and build with coquina in order to use it the build a stronger fort.

In pre-Portland cement days, lime was the universal agent in masonry. It was made by calcinating limestone or seashells. Mixed with sand, it formed the mortar used to lay up brick or stone. With sand plus an aggregate such as pebbles or shell, it was tabby, a versatile material much like modern concrete and suitable for walls, roof and floors. There were lime formulas for rough work, fine work, plasters, and whitewashes.

Homebuilders learned to burn the oyster shells to create lime, and then mixed the lime with sand and crushed oyster shells for form a rough kind of concrete called tabby. Tabby could be used for walls or flooring.

Critical thinking question:

What technology produced the most fire-resistant housing?
The longest lasting?