Lesson Plan: The Leaning Tower of Pisa

Transcript Summary

In this episode of Sketch and Coffee Live at 5:30am Texas time, Blade sketched the Leaning Tower of Pisa and reflected on its history and quirks. He noted that the tower is not a watchtower but a bell tower with nothing inside but stairs, that it began leaning during construction in the 12th century, and that it took nearly 200 years to complete due to wars and design challenges. He compared its height to four stacked brachiosauruses, described its seven bells and their limited ceremonial use, and pointed out how Pisa's 90,000 residents host millions of tourists each year.

Episode link: https://www.youtube.com/live/_GKxSrtH5wg?si=rX07KHDn_7q232nv

Objective

Students will explore the history, architecture, and cultural impact of the Leaning Tower of Pisa, understanding how design flaws, historical events, and modern tourism have shaped its story.

Materials

- World history or geography textbook
- Map of Italy
- Ruler or measuring tape
- Paper and pencils for sketching exercises
- Optional: photos of the Leaning Tower of Pisa
- Optional: video clip of bells ringing in Pisa

Introduction

Ask students what they know about the Leaning Tower of Pisa. Have them share mental images or common tourist photos they have seen. Discuss what assumptions they might have about its purpose and structure.

Main Content

- Construction began in 1173 and lasted until 1372, with long interruptions.
- The tower leaned as early as the second story due to Pisa's unstable soil.
- Builders attempted to disguise the tilt by making one side taller, creating a curve.
- The interior is a spiral staircase leading to seven bells at the top.
- The bells are now rung only for special occasions using electromagnetic hammers.
- Pisa has about 90,000 residents but receives millions of tourists annually.
- Tourism accounts for a significant portion of Pisa's economy.

Activity

Students will:

1. Sketch the tower using simple shapes, focusing on the lean.
2. Measure classroom objects and compare their heights to the tower's 186 feet, then convert to meters.
3. Roleplay as engineers deciding how to preserve or restore the tower.

Assessment

- Short written quiz on the key facts.
- Participation in the sketching and measurement activity.
- Group discussion contributions.

Rubric

Criteria	4 - Excellent	3 - Good	2 - Fair	1 - Needs Improvement
Knowledge of Facts	Accurately recalls all details	Recalls most details	Recalls some details	Limited recall
Participation	Fully engaged in all tasks	Engaged in most tasks	Minimal engagement	Rarely engaged
Critical Thinking	Offers thoughtful insights	Offers some insights	Few insights	No insights
Communication	Clear and confident	Mostly clear	Somewhat unclear	Unclear

Conclusion

Review the Leaning Tower of Pisa as both a flawed design and a world icon. Emphasize how history, engineering, and tourism intersect in its survival and continued fascination.

9 Fun Facts About the Leaning Tower of Pisa

1. It Took Almost 200 Years to Build Work began in 1173 and stretched until 1372, nearly two centuries later. Construction stopped multiple times, partly because wars interrupted funding and partly because the tower started tilting early on.

https://www.turismo.pisa.it/en/culture/detail/Piazza-del-Duomo-La-torre-pendente

2. The Lean Started Right Away After only a few floors were built, the tower started sinking into Pisa's soft, sandy clay soil. By the late 1170s the tilt was obvious enough that construction had to pause to rethink the project.

https://www.turismo.pisa.it/en/culture/detail/Piazza-del-Duomo-La-torre-pendente

3. They Tried to "Fix" It While Building Later builders attempted to compensate by making the upper floors taller on one side than the other. This gave the tower a subtle curve, almost like a banana, instead of a straight lean.

https://www.britannica.com/topic/Leaning-Tower-of-Pisa

4. It's Not That Tall, But Quirky The tower is about 56 meters (186 feet) tall on its high side. Because of the tilt, one side is a little shorter. That is roughly four Brachiosauruses stacked on top of one another.

https://www.visittuscany.com/en/attractions/piazza-dei-miracoli/

5. The Inside Is Just a Staircase Unlike a castle or palace tower, there are no rooms inside. Visitors climb a narrow spiral staircase of nearly 300 steps to reach the bell chamber at the top.

https://www.britannica.com/topic/Leaning-Tower-of-Pisa

6. Seven Bells, Seven Notes The bell chamber holds seven bells, each tuned to a different note of the musical scale. Today they do not swing as in centuries past but are kept mostly silent, rung only on special occasions to protect the structure.

https://www.bells.org/blog/why-dont-bells-leaning-tower-pisa-swing

7. Saved From Collapse By the late 20th century the lean was becoming dangerous. In the 1990s engineers closed the site for a decade, added counterweights, anchored cables, and removed soil under the high side. This reduced the tilt by about 40 centimeters and stabilized the tower for the future.

https://www.britannica.com/topic/Leaning-Tower-of-Pisa

8. Pisa Is a Small City With a Huge Draw The city of Pisa has about 90,000 residents. Yet the Piazza dei Miracoli, where the tower stands, welcomes millions every year, with over four million visitors recorded in 2024 alone.

https://www.iltirreno.it/pisa/cronaca/2024/12/14/news/oltre-quattro-milioni-di-visitatori-per-i-gioielli-di-piazza-dei-miracoli-1.100633025

9. Tourism Powers the Economy While Pisa also has agriculture, light industry, and one of Europe's oldest universities, tourism tied to the Leaning Tower is its biggest economic driver. The UNESCO-listed Piazza del Duomo is the centerpiece of this global draw, generating hundreds of millions of euros each year.

https://whc.unesco.org/en/list/395/

Worksheet

Name: _____ Date: _____

Review Questions

1. When did construction on the Leaning Tower of Pisa begin and end?

2. What caused the tower to lean so early in construction?

3. How did builders try to disguise the tilt?

4. How tall is the tower in feet and meters?

Discussion Questions

1. Why do you think Pisa's lean became a feature rather than being rebuilt?

2. How does tourism both help and challenge a city like Pisa?

Data Analysis

If Pisa has about 90,000 residents and receives about 5 million tourists each year, how many tourists per resident is that? Show your math.

Reflection

What lesson can modern builders and engineers learn from the story of the Leaning Tower of Pisa?