

# Terms, People, and Places

- Pre-Columbian
- Bering Strait theory
- Mayas
- Aztecs
- Incas
- Quipus
- Chinampas
- Machu Picchu
- Tenochtitlan

# Lesson Objectives:

- Why was agriculture important to Mesoamerican civilizations?
- What significance did religion have in the empire of the Americas?
- What types of governments allowed Mesoamerican societies to rule large areas?
- What were the accomplishments and advances of Mesoamerican empires?

# Summary

## “Civilizations of the Americas”

Complex civilizations grew in the Americas from about 1400 BCE to 1500 CE. The Olmecs had the first major American civilization, followed by the Mayas and Aztecs in Mexico and Central America and by the Incas in South America. For all these civilizations, agriculture was a primary economic activity that allowed populations to grow. Religion unified the empires. The later Mesoamerican civilizations developed complex government systems and trade networks. Mesoamerican societies made advances in agriculture, medicine, mathematics, engineering, and other areas.

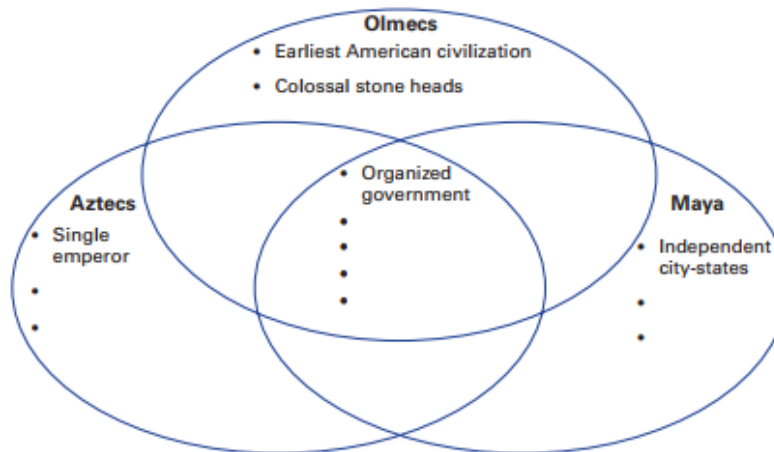
CHAPTER <b style="font-size: 2em;">6</b> SECTION 1	<b style="font-size: 1.5em;">Note Taking Study Guide</b> CIVILIZATIONS OF MESOAMERICA
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**Focus Question:** What factors encouraged the rise of powerful civilizations in Mesoamerica?

A. As you read "People Settle in the Americas," complete the following chart to record the similarities and differences in how early people adapted to climate and geography in different parts of the Americas. Some items have been completed for you.

Adapting to the Americas	
Climate	Geography
<ul style="list-style-type: none"> <li>• Icy climates to the extreme south and north</li> <li>• _____</li> <li>• _____</li> <li>• _____</li> </ul>	<ul style="list-style-type: none"> <li>• Mountains</li> <li>• _____</li> <li>• _____</li> <li>• _____</li> </ul>

B. As you read the rest of this section in your textbook, complete the following Venn diagram in order to recognize the similarities and differences among the cultures of Mesoamerica. Some items have been completed for you.



CHAPTER  
**6**  
SECTION 1

## Section Summary

### CIVILIZATIONS OF MESOAMERICA

People first came to the Americas from Asia between 60,000 B.C. and 18,000 B.C. They may have walked across a land bridge or come by boat. By about 1500 B.C., people had settled in **Mesoamerica**, a region made up of Mexico and Central America. There they grew **maize** and other crops, raised animals, and lived in villages. Some of these villages became great cities.

The **Olmecs** formed the first civilization in the Americas. It lasted from about 1500 B.C. to 400 B.C. A class of priests and nobles were its leaders. Later Mesoamerican peoples, including the Maya and Aztecs, adopted features of Olmec culture, such as carved stone, hieroglyphs, and the calendar.

Around 300 B.C., the Maya were building large cities in present-day Guatemala. By the time of the Maya golden age, about A.D. 250, the civilization included large, independent city-states spreading from southern Mexico through Central America. The Maya never formed an empire, however. Instead, cities kept in contact through trade and war. Maya cities included stone temples, palaces, and **stelae**. Stelae were tall stone monuments decorated with carvings. Scribes carved each stela with the names of rulers and dates. They also wrote about astronomy and religion in books of bark paper. Around A.D. 900, the Maya left most of their cities. This may have happened due to frequent warfare or over-farming.

The Aztec civilization began in the **Valley of Mexico**. In A.D. 1325 the Aztecs founded **Tenochtitlán**, their capital. Because it was located on an island in a lake, the Aztecs found ingenious ways to create more farmland; they built chinampas. These were human-made islands of mud and reeds.

Unlike the Maya, the Aztecs created an empire. They were at war constantly. As their empire grew, they used **tribute**, or payment from conquered peoples, to beautify Tenochtitlán. They sacrificed war prisoners to the sun god. Some of their gods included the gods of an earlier culture from the city of **Teotihuacán**. Its culture greatly influenced later peoples.

### Review Questions

1. Why did the Maya leave their cities?

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2. How did the Aztecs use tribute?

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### READING CHECK

Who were the leaders of Olmec society?

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### VOCABULARY STRATEGY

Find the word *ingenious* in the underlined sentence. What does *ingenious* mean? It comes from a Latin word that means "natural talent." Think about people who have a natural talent, such as intelligence. Use these clues to help you figure out what *ingenious* means.

### READING SKILL

**Compare and Contrast** How were the Aztecs and Maya cultures alike? How were they different? Think about the Olmec influence on both cultures.

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## CHAPTER

## 6

## SECTION 2

## Section Summary

## ANDEAN CULTURES OF SOUTH AMERICA

The first cultures of South America developed in the Andes. The earliest was the **Chavín** culture. Around 900 B.C., these people built a huge temple complex. Later, between A.D. 100 and 700, the **Moche** people lived along the north coast of Peru. They improved farming techniques, built roads, and used relay runners to carry messages. They made large buildings of **adobe** bricks. Moche artists made ceramic jars in the shape of people and animals.

The **Nazca** people, who lived between 500 B.C. and A.D. 500, are known for the huge pictures of animals they drew in the earth. Other cultures lived in the cities of **Huari** and **Tiahuanaco**. These two cities controlled large territories. They may have been connected through trade or religion because their art is similar.

The people with the most powerful Andean civilization were the Inca. Their culture appeared in the 1100s but grew most powerful after 1438. That is when **Pachacuti Inca Yupanqui** declared himself **Sapa Inca**, or emperor. Eventually, the Inca empire stretched from Ecuador in the north to Chile in the south. The Inca built a network of roads that criss-crossed the empire. The roads covered about 14,000 miles and ran through deserts and over mountains. These roads allowed news and armies to travel quickly to all parts of the empire. All the roads led to the capital city, **Cuzco**.

The Inca worshiped many gods, but the most important was **Inti**, the sun god. Inca rulers had absolute power and ran an efficient government. Nobles ruled provinces, and local officials handled everyday business. Officials kept records on **quipu**, which were colored strings knotted to represent numbers. Everyone had to speak the Inca language and follow the Inca religion. Each village, or **ayllu**, had a leader who assigned jobs and organized work for the government. Farmers built terraces to farm the steep hillsides. They spent part of the year farming for their village and part working land for the emperor.

## Review Questions

1. Which peoples lived in South America before the Inca?

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2. What was the purpose of the Inca roads?

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## READING CHECK

Which civilization used adobe for building?

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## VOCABULARY STRATEGY

Find the word *network* in the underlined sentence. What does *network* mean? You can see that it is a compound word, or a word made from two other words—*net* and *work*. Use what you know about the meanings of the words *net* and *work* to help you figure out the meaning of *network*.

## READING SKILL

**Contrast** How was an Inca farmer's life different from the Inca emperor's life?

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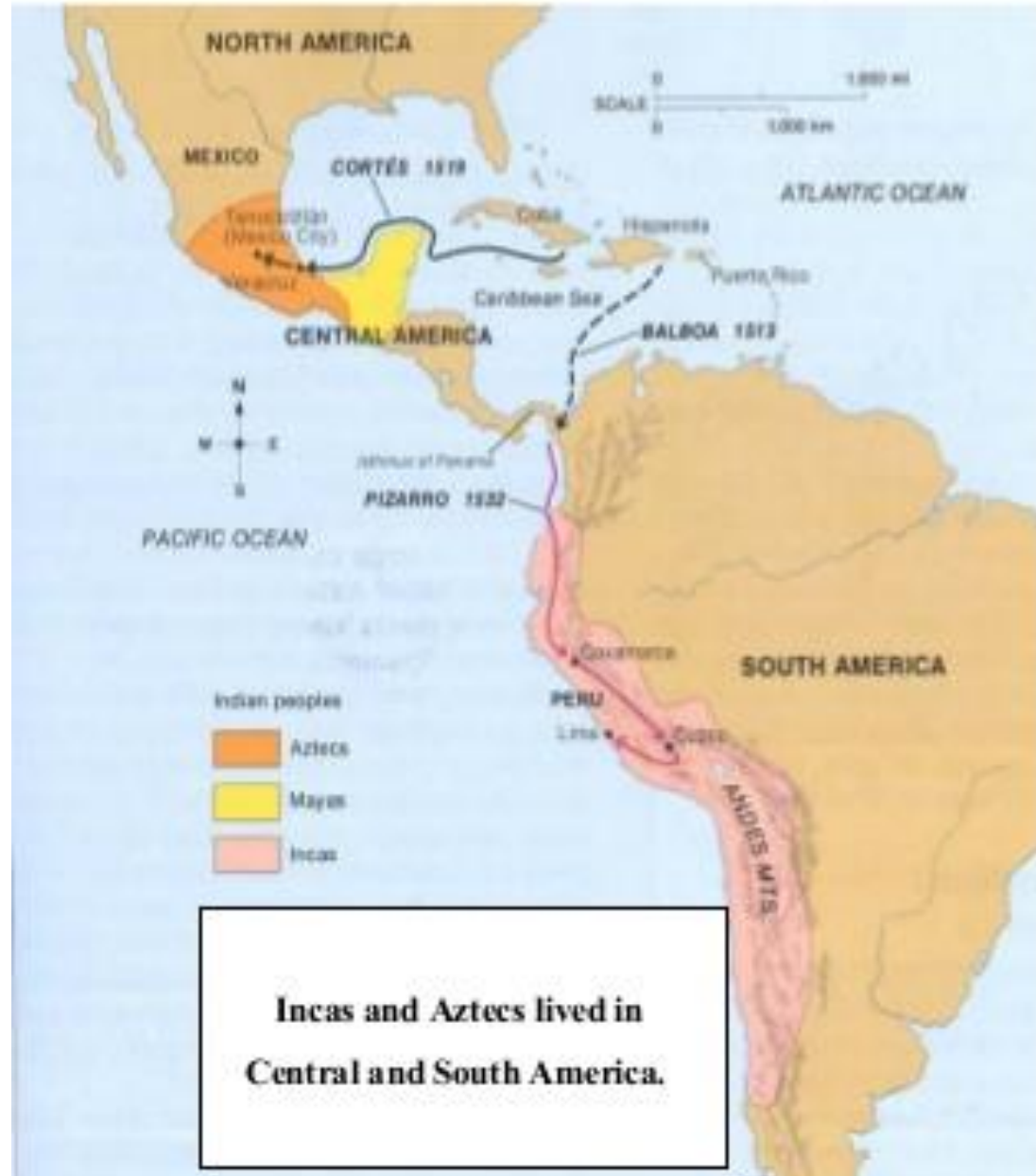


# Aim #20: How did Native American civilizations develop before European arrival?



# Pre- Columbian Civilizations

- organized
- developed
- advanced





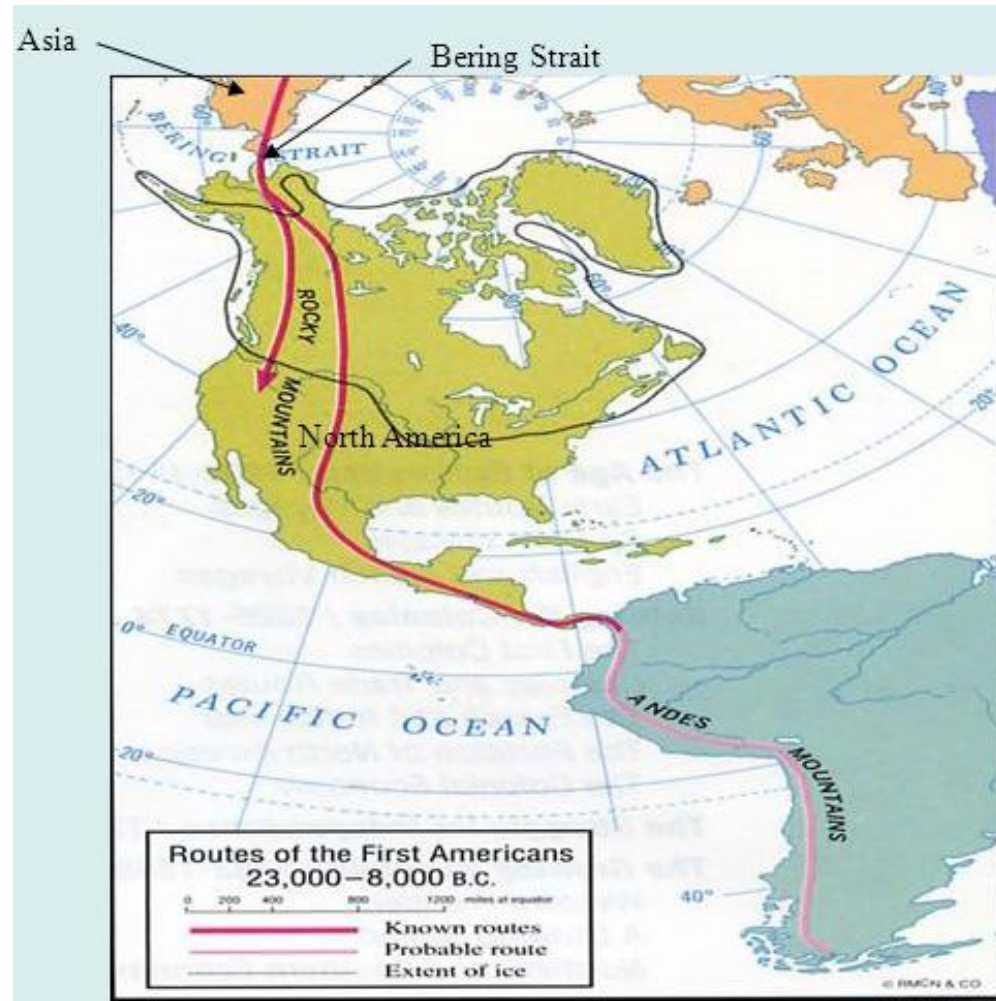
Map A: Political Map of the World in 750 CE



Map B: Political Map of the World in 1453 CE



# First "Americans"

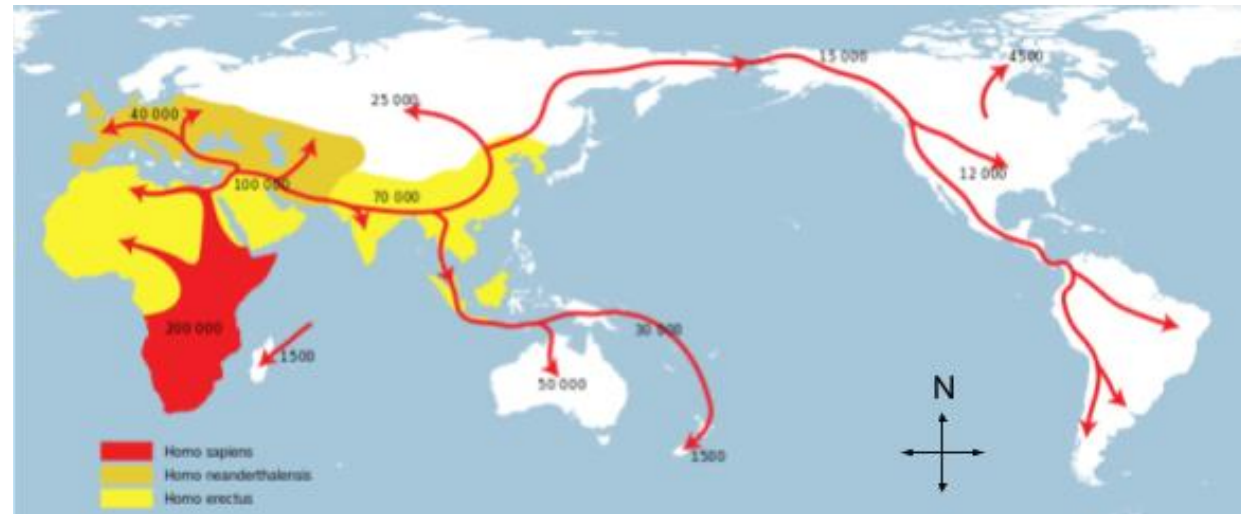




# What civilizations existed in the Americas pre-1600? Where did the people who founded those civilizations come from?

The North and South American continents, in the Western Hemisphere, were some of the last regions of the Earth where people settled. They migrated from northeastern Asia, across the Bering Strait, a narrow section of water that froze over in the winter, between modern day Russia and Alaska, 15,000 years ago. Most likely, they were following herds of animals that migrated across the strait and continued traveling southward into the continents.

Between 12,000 BCE and the arrival of Spanish ships in the late 1400s and 1500s, many civilizations emerged on the American continents. Complex civilizations rose and fell in North America, the Caribbean, Central America, and South America. In this unit, you will study three of these civilizations: the Maya, Inca, and Aztecs.

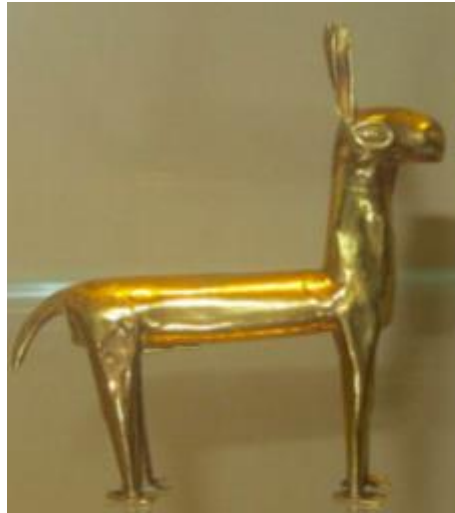


The red arrows on this map depict the spread of modern-day humans (homo sapiens) out of Africa during the Paleolithic Era. Humans followed migrating animal herds and moved into areas with more food to gather until they spread around the world. The numbers identify how many years ago (i.e.: 70,000 years ago) humans arrived in each area.

# How do we know what we know about civilizations in the Americas pre-1600?

**Directions:** For each of the sources below, identify what historians might be able to learn about civilizations in the Americas pre-1600, if the source is a reliable source of evidence about civilizations in the Americas pre-1600, and what limitations the source has for historians.

## Source 1: Artifacts



Incan gold llama figurine;



Mayan temple at Tikal, Guatemala

1a. What can historians learn from artifacts about American civilizations pre-1600?

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1b. What limits do artifacts on American civilizations pre-1600 have as historical sources?

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1c. What other sources would help historians understand civilizations in the Americas pre-1600?

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1d. Identify the extent to which artifacts are reliable sources of evidence for understanding civilizations in the Americas pre-1600 by circling reliable, somewhat reliable, or unreliable, then explain why you chose that option.

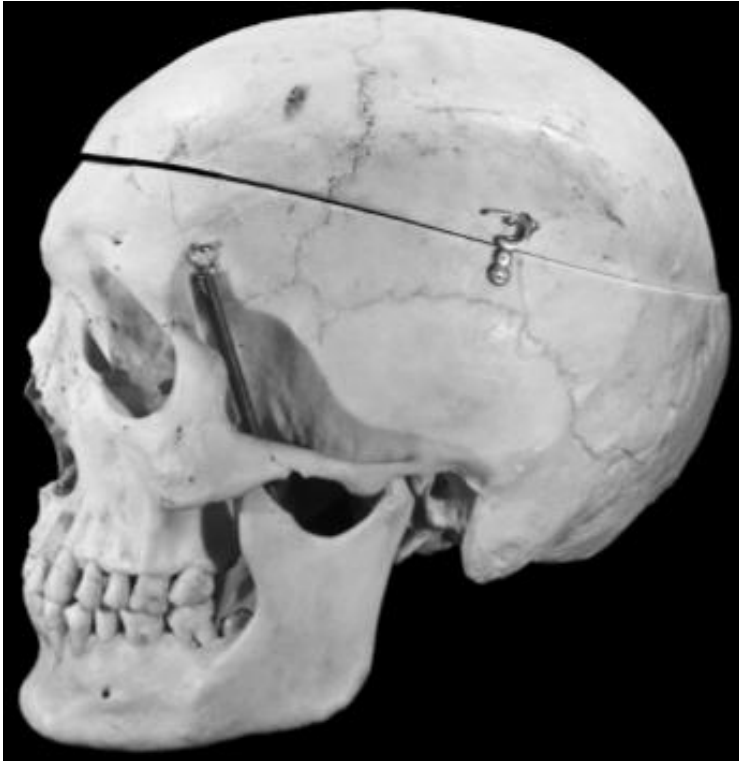
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**Artifacts** are objects made by humans like tools, buildings, weapons, art, pottery, and clothing that are usually found and studied by archaeologists.

**Archaeology** is the study of the past through what has been left by behind.



## Source 2: Skeletons



2a. What can historians learn from skeletons about American civilizations pre-1600?

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2b. What limits do skeletons on American civilizations pre-1600 have as historical sources?

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2c. What other sources would help historians understand civilizations in the Americas pre-1600?

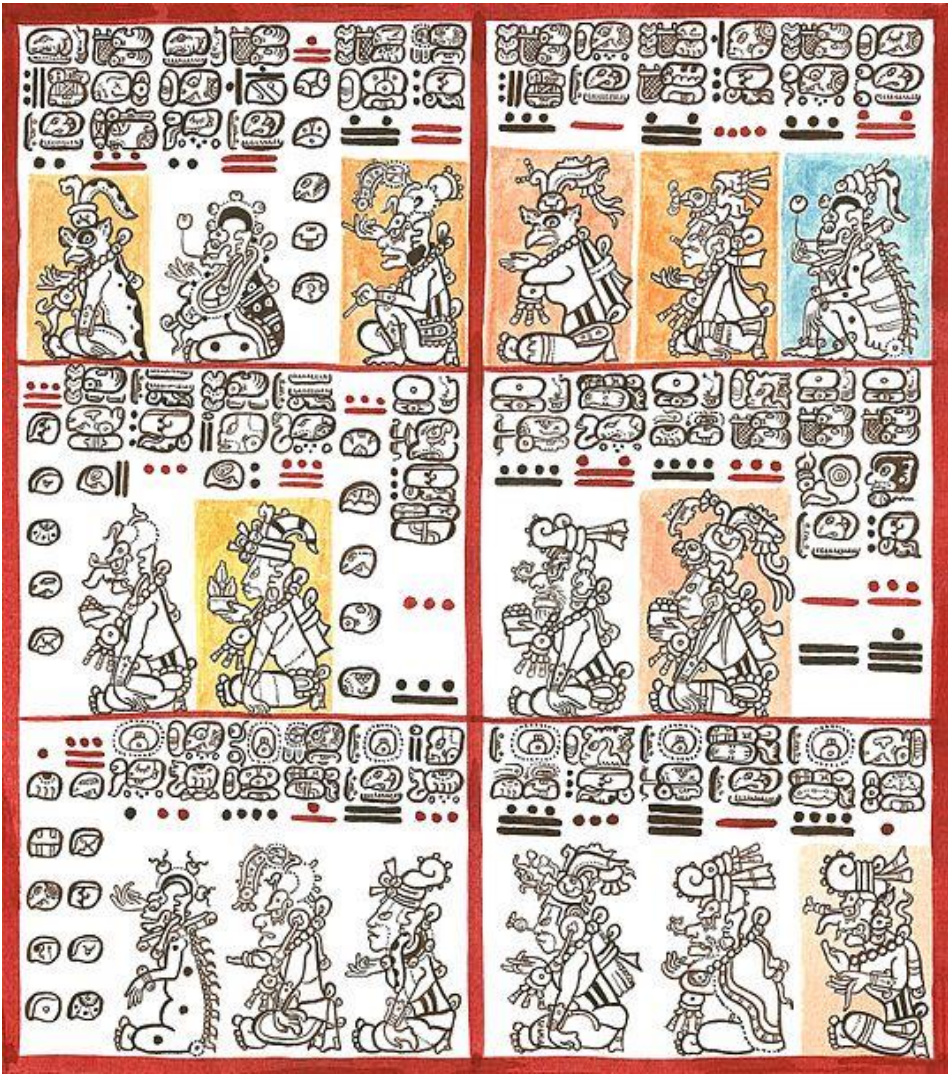
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2d. Identify the extent to which skeletons are reliable sources of evidence for understanding civilizations in the Americas pre-1600 by circling reliable, somewhat reliable, or unreliable, then explain why you chose that option.

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**Anthropology** is the study of the origins and development of people and their society. Some anthropologists study human skeletons to figure out how they lived, what they ate, and how they died.

### Source 3: Writing from American Civilizations before Spanish Contact



A section of the Dresden Maya Codex

3a. What can historians learn from writing from American civilizations before Spanish contact about American civilizations pre-1600?

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3b. What limits do writing from American civilizations before Spanish contact on American civilizations pre-1600 have as historical sources?

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3c. What other sources would help historians understand civilizations in the Americas pre-1600?

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3d. Identify the extent to which writing from American civilizations before Spanish contact are reliable sources of evidence for understanding civilizations in the Americas pre-1600 by circling reliable, somewhat reliable, or unreliable, then explain why you chose that option.

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A **codex** is a type of ancient book and when the Spanish arrived in the Americas, there were codices (plural for codex) from the Maya and Aztec, but most were destroyed by the Spanish conquerors because they saw no value in the books and thought they were anti-Christian. Despite this, some survived. The codices are written in pictographs, images that represent objects or ideas, and have been studied since their discovery.

## Source 4: Inca and Aztec Perspectives After the Spanish Arrival

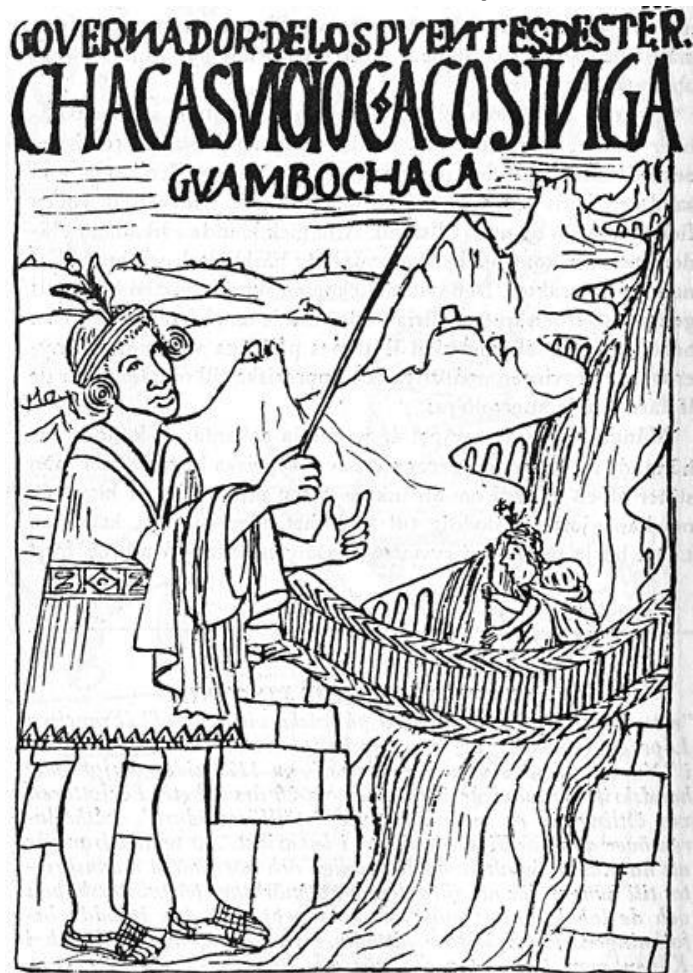


Image from Guáman Poma's book *El Primer Nueva Corónica y Buen Gobierno*, or "The First New Chronicle and Good Government."

After the arrival of the Spanish, Aztec and Inca writers documented their civilizations and their experiences under Spanish rule as a way of preserving their heritage and in hopes of changing Spanish cruelty. One such book was written by Guáman Poma, an Inca man who was born in 1535, just after the Spanish conquered the Incan empire. He wrote a 1,189 page book entitled *El Primer Nueva Corónica y Buen Gobierno*, or "The First New Chronicle and Good Government." The book was intended for King Philip II of Spain to explain to him the history of Andean civilization and to show the king how the Spanish colonists had damaged the Inca way of life.

4a. What can historians learn from Inca and Aztec perspectives after the Spanish arrival about American civilizations pre-1600?

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4b. What limits do Inca and Aztec perspectives after the Spanish arrival on American civilizations pre-1600 have as historical sources?

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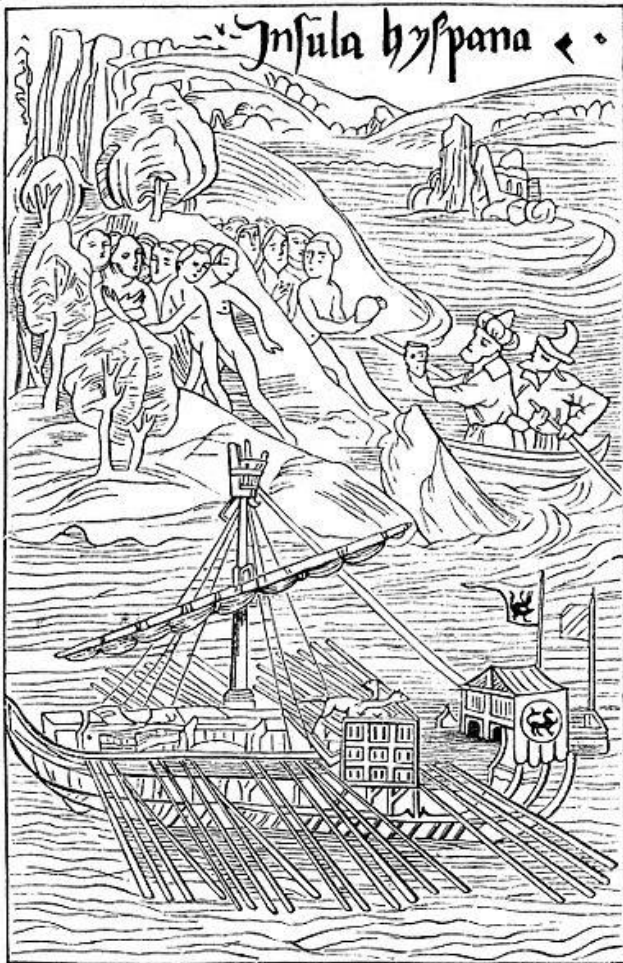
4c. What other sources would help historians understand civilizations in the Americas pre-1600?

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4d. Identify the extent to which Inca and Aztec perspectives after the Spanish arrival are reliable sources of evidence for understanding civilizations in the Americas pre-1600 by circling reliable, somewhat reliable, or unreliable, then explain why you chose that option.

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## Source 5: Spanish Perspectives



A depiction of Christopher Columbus landing in the “New World” from a 1494 publication of a letter from his first voyage.

In 1492, Christopher Columbus and his crew were the first Spanish to arrive in Americas. Columbus wrote about his experiences for King Ferdinand and Queen Isabella of Spain who funded his voyage and for larger audiences in Europe who were eager to learn about the newly discovered land. The Spanish who came to the Americas after Columbus wrote accounts describing the civilizations they encountered too. All of the accounts written were biased by the perspectives of the authors and their goals in America. For some, it was the search for riches and land and to bring Christianity.

5a. What can historians learn from Spanish perspectives on American civilizations pre-1600?

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5b. What limits do Spanish perspectives on American civilizations pre-1600 have as historical sources?

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5c. What other sources would help historians understand civilizations in the Americas pre-1600?

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5d. Identify the extent to which Spanish perspectives are reliable sources of evidence for understanding civilizations in the Americas pre-1600 by circling reliable, somewhat reliable, or unreliable, then explain why you chose that option.

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# Olmec Empire (1400 B.C.E- 500 B.C.E)

- “Mother Culture”





## Timeline of Mayan Civilization

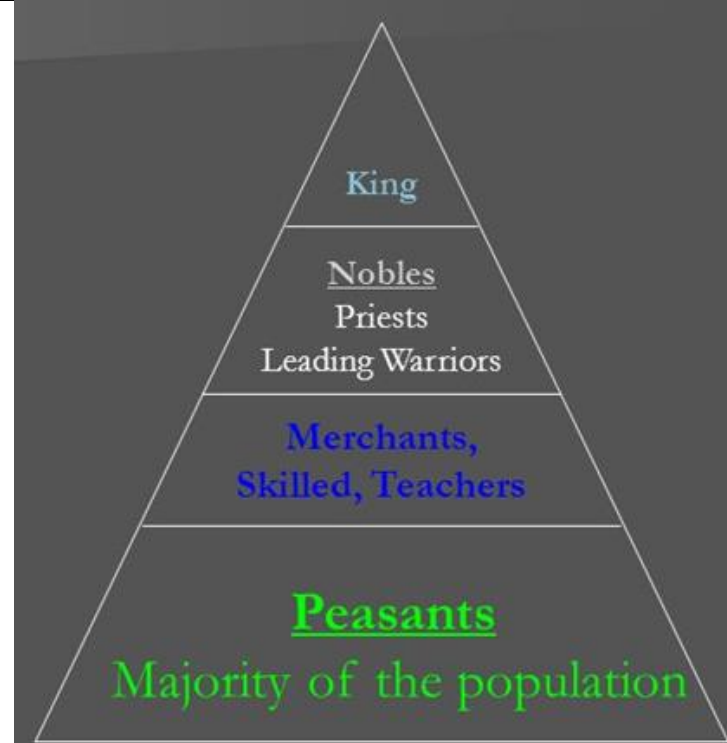
# Mayas (300-900)



- Mesoamerica
- City-states w/ hereditary-divine king
- Agricultural & traded
- Hierarchy
- Polytheistic
  - Large temples
- Golden Age Achievements
  - Hieroglyphics
  - calendar
  - Numbering system w/ zero
- ?abandonment?

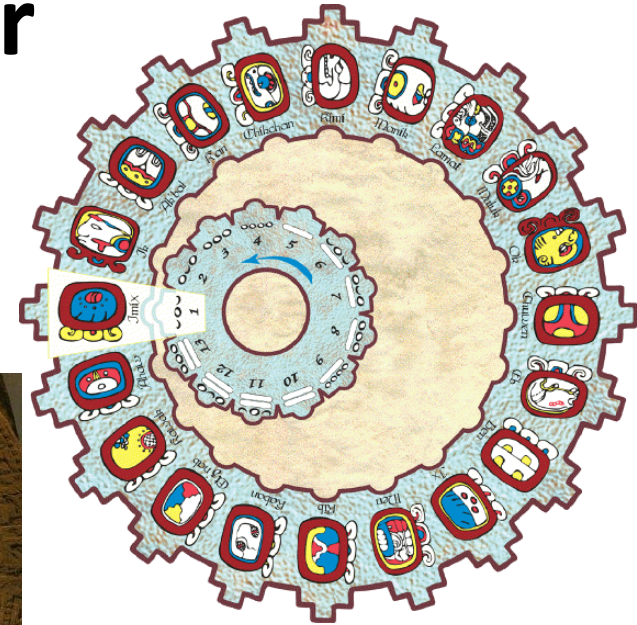
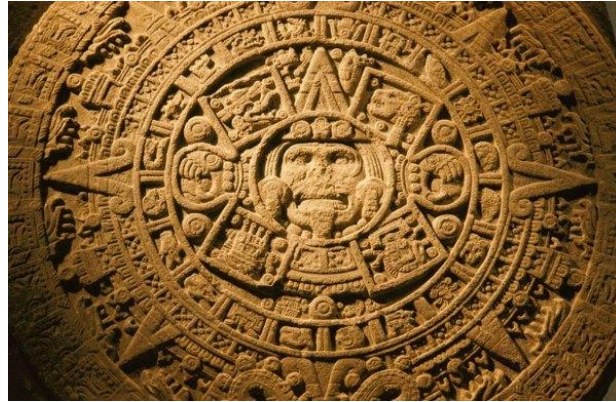


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10	11	12	13	14
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15	16	17	18	19
	•	••	•••	••••



# Mayan Calendar

- two different parts
- solar calendar
  - 365 days
  - divided into 18 months w/ 20 days each & 5 extra days
- Lunar calendar, based on movement of Venus
  - a sacred calendar with 260 days & 13 weeks of 20 days each





# What was the historical and geographic context for the rise of the Mayan Civilization?

**Directions:** Watch and excerpt from this [National Geographic Documentary entitled The Maya: the Lost Civilization \(6:20-8:15\)](#) and this [video about modern-day Mayan culture and their history from the Smithsonian National Museum of the American Indian](#), and read the text below, then respond to the accompanying questions.

The Mayan were people who settled in and around the Yucatán Peninsula in modern-day southeastern Mexico, Guatemala, Belize, El Salvador and Honduras. The Mayan people have lived in those areas continuously since at least 7,000 BCE where they constructed an organized and complex civilization consisting of many city-states throughout the region.

The Mayan civilization reached the height of its achievements and political power during its golden age in the **Mayan Classical Period** (250-950 CE). During the classical period, the Maya built large cities, created distinct art and architecture, and made advances in mathematics and astronomy.

Around 1,000 CE, people started to leave the great Mayan cities and settle in rural areas. The civilization declined and the urban centers turned into overgrown ruins. Though it is not certain, many archaeologists and historians believe that the decline of the Mayan civilization was largely due to environmental changes that resulted in a long period of drought.



1. Identify three scientific, artistic, and/or scholarly achievements of the Maya mentioned in the videos and text.
2. Where do the Maya people live today?

# How did the Maya innovate to meet their needs?

**Directions:** [Watch Water and Classical Civilizations: Crash Course World History](#) (2:24-4:40) and read the transcript below and examine the image below then answer the accompanying questions.

3:14 The Yucatan is not an ideal place to build a civilization. Most of it is a karst [limestone landscape with sinkholes, cracks, ridges, and towers created by erosion] plain with a bedrock of limestone. The soils are poor and the water table is too low to excavate wells without modern digging equipment.

3:27 There aren't many rivers and rainfall is highly seasonal, with torrential downpours during the unpredictable wet season and a long dry season. Much of Mayan agriculture was small scale, but it produced enough surplus to provide tribute for the Holy Lords. Archeological records show that by 1000 BCE people were digging ditches to drain swamps, and settlements were built in such a way to capture rain runoff.

3:51 Tikal is one of the major Mayan centers that has over 3000 structures in its 16 square kilometer footprint. It took generations to build and it "entirely lacked a natural supply of water: no springs, rivers, or lakes in its immediate vicinity." So to supply water for the estimated 60,000 people who lived and worked there they created reservoirs.

4:12 A diverse environment meant diverse solutions to water issues. At Edzna they built cisterns to capture rainwater and canals to connect reservoirs to the central ceremonial complex. They were able to collect 2 million cubic meters of water from runoff. At Palenque, in the lowlands of Chiapas, Mexico they built "aqueducts, dams, channels, drains and a bridge," to control flooding caused by streams that fed the city. In all these places, water management required a lot of labor. How much of this was cooperative and how much was coerced, we can't really say.



A Mayan aqueduct at the Palace at Palenque used to move water in the city for drinking and agriculture.

- 1. Why did the Maya need to create innovative ways to manage water?**
- 2. Describe two ways the Maya changed their environment to meet their needs.**

# The Golden Age of Mayan Civilization

Timeline of Mayan Civilization



The Mayan civilization started around 1500 BCE and lasted until approximately 1530 CE when the Spanish colonized the area. This time is often divided into three eras; Pre-classic, the Classic, and Post-classic periods. The Classic period, from 250-900 CE is considered the Mayan Golden Age.

Unlike other civilizations you have studied in Global History that had Golden Ages, the Maya were not united under one government. Each of the city-states was independent. During the Classic period, the city states generally prospered. Trade increased, they built large cities with impressive structures and artwork, and made advances in science and technology that rivaled the much more interconnected civilizations in Eurasia.



Map of Mayan Cities where most of the population lived.



# The Maya Golden Age Museum Walk

In this activity, you will visit exhibits on the Maya Golden Age. As you learn about the Maya Golden Age, fill out the appropriate row in the graphic organizer below about the achievements of the Maya.

Golden Age	ACHIEVEMENTS and INNOVATIONS			
	Prosperity and Stability	Visual Arts and Architecture	Literature, Music, and Philosophy	Science, Mathematics, and Technology
Maya Golden Age (800-925 CE)				

## Exhibit A: Mayan Government Structure During the Golden Age

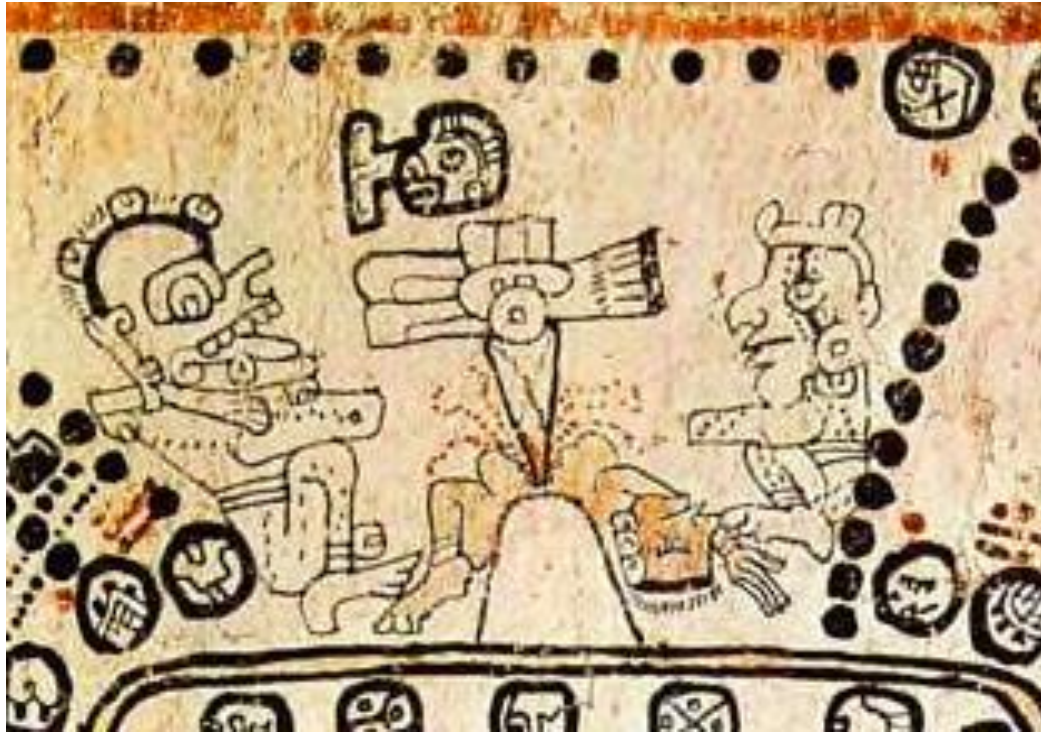
While the Mayan civilization was made up of independent city-states, during the Golden Age, some cities rose to prominence and consolidated power in their regions. In the northern Yucatan for example, those cities were Chichen Itza and Uxmal.

Mayan rulers were thought to be god-like, which gave them ultimate power in the city state they controlled. The right to rule was passed down in families and occasionally, usually when male rulers were too young to take the throne or when they were away at war, women were the rulers.



K'inich Janaab' Pacal otherwise known as Lord Pacal and Pacal the Great, 603-683 CE and Mayan king of Palenque. (National Museum of Anthropology, Mexico City)

## Exhibit A: Mayan Religious Beliefs Encourage Sacrifice to the State and Gods



Depiction of a sacrifice by heart removal from the Madrid Codex.

Mayan religious beliefs had an effect on almost all aspects of their lives. Their beliefs inspired aspects of their architecture, mathematics, astronomy, sport, and government.

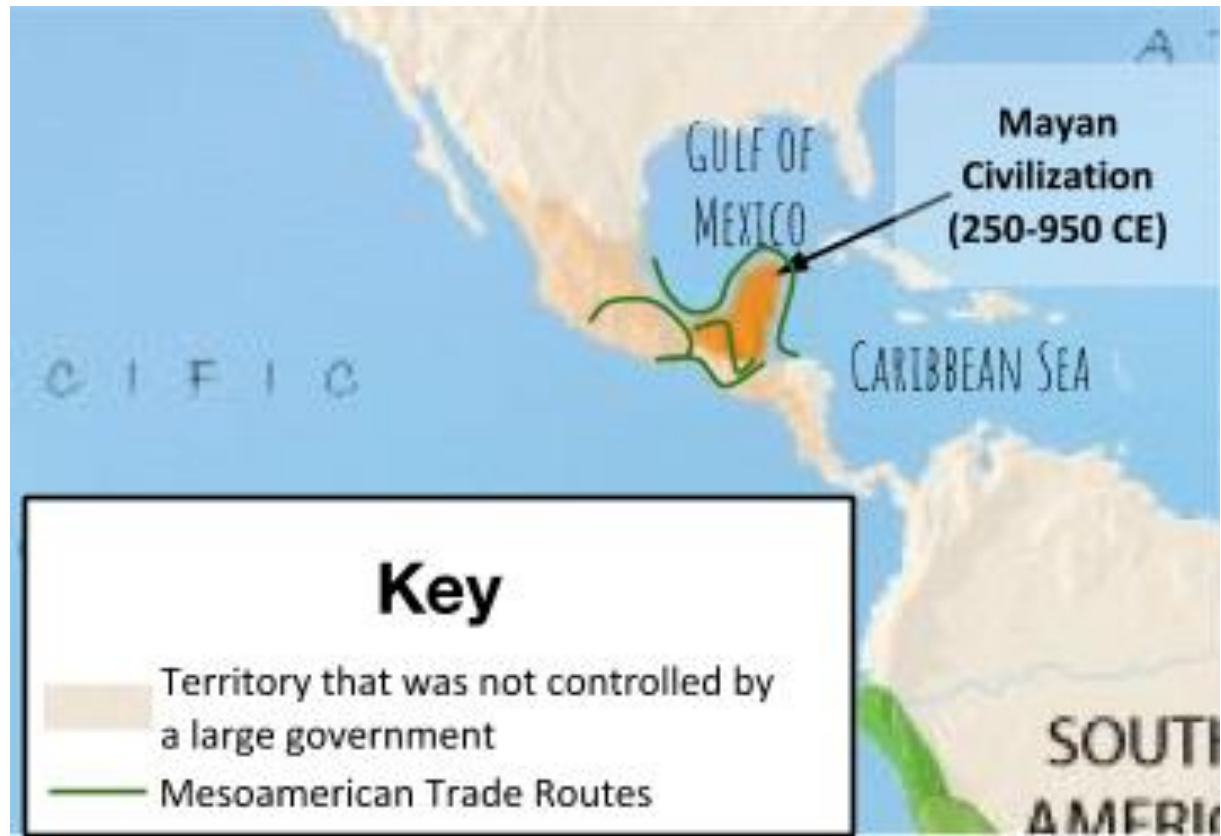
The Maya believed that when one died, they embarked on a journey that began in a dark place deep beneath the earth called Xibalba. After death a person's soul traveled through nine levels of Xibalba, and then up thirteen more levels through the Tree of Life to the "place of the misty sky," a mountain top paradise, called Tamoanchan. The journey was long and full of challenges.

There were ways that a soul could skip the arduous journey after death and go straight to Tamoanchan. If one died in childbirth, as a sacrifice to the gods or ruler, as a soldier in war, on the ball court, or by suicide, their soul could go directly to paradise.

Since the rulers in Mayan city-states were viewed as gods, dying for their attempts to gain, consolidate, and maintain power led to rewards in the afterlife. Through war, human sacrifice, and in ball games, which some historians believe were used to settle disputes between city-states and to entertain the population, one could guarantee eternal happiness.

# Exhibit B: Increase in Trade, Increase in Population, Increase in Warfare

Though the Mayan cities were independent, they were connected to one another through trade during the Classic Period. This benefited city-states that lacked resources they need. For example, an area that had productive farmland because of drought, could trade for food with others who had it. There is evidence of trade in slaves, salt, honey and precious goods such as metals, feathers, and shells in the Mayan civilization.





## Exhibit C: The Mayan Ballgame That Was More Than a Game

Watch this [UNESCO video depicting the ballgame court in the Mayan city, El Tajin](#) and [this video from Great Big Story about a group of athletes in Hidalgo, Mexico in 2018 who are trying to revive the Mesoamerican ballgame.](#)



This ballcourt is part of the ruins at the Cobá archeological site, and was used for playing a game that had significant religious and political implications for the Mayan people.

The Mesoamerican Ballgame was played throughout the Mayan civilization and later by the Aztecs. Almost every major Mayan city had a ballcourt to play the game and some had several like the city of Cantona which had twenty four courts and the city of El Tajin which had eleven.

There were variations of the game throughout the Mayan civilization, so there was no one way to play it. In most, two teams of seven players tried to score by getting a rubber ball either on the opponent's side of the court or through a hoop that was attached to a wall perpendicular to the ground. Players could not use their hands or feet to hit the ball. Instead, they relied on their elbows, knees, thighs, shoulders, and hips.

The ball game was more than just a sport to the Maya because it was weaved into their religious beliefs. In myths, for example, gods played the game. Human sacrifice was a part of the consequences for the game, but scholars are uncertain whether it was the winning team or the losing team that were sacrificed. Some burial grounds have been found where players were buried with trophies for winning the ballgame, suggesting that the winners were sacrificed and that the Mayan believed their souls would go on to paradise because they died as sacrifices and victors.

## Exhibit D: Mayan Architecture

[Watch this National Geographic video about the Mayan city, Chichén Itzá](#) that highlights its architecture.



El Castillo, a pyramid in the city Chichén Itzá in modern-day Mexico.

The pyramids in Mayan cities are the most recognizable buildings at the archeological sites. The pyramids were used for religious ceremonies where offerings were made to the gods and they were tombs for rulers, sacrifices, and valuable goods.

The pyramid pictured above and in the video from Chichén Itzá is a model example of a Mayan pyramid. It was constructed with nine levels, mirroring the nine levels of Xibalba that Mayans believed their soul journeyed through after death and it has 91 steps on each side of the pyramid, which when added together with the final step of the temple platform equals 365, the number of days in every year on the Mayan calendar. In addition, the pyramid is positioned so that twice a year the sun projects a shadow of the nine level to create a snake's body on the sides of the stairways that end at a serpent's head sculpted at the bottom. These characteristics demonstrate the knowledge of math, astronomy and architecture that the Mayans possessed.



## Exhibit E: Mayan Hieroglyphs

The Maya system of writing were hieroglyphs, pictures that represented words, sounds, or ideas. Most likely, only a small number of Mayans wrote the language, probably the nobility and priests and there is evidence that women of those classes were able to read and write.

Unfortunately, when the Spanish took over the region where the Maya lived in the 1500s, they prohibited the use of the written language because it was un-Christian. The Spanish collected ancient books called codices (plural of codex) written by the Maya and destroyed them. Luckily, a few survived, which archaeologists use along with inscriptions in rock to help them decipher how to read the language.

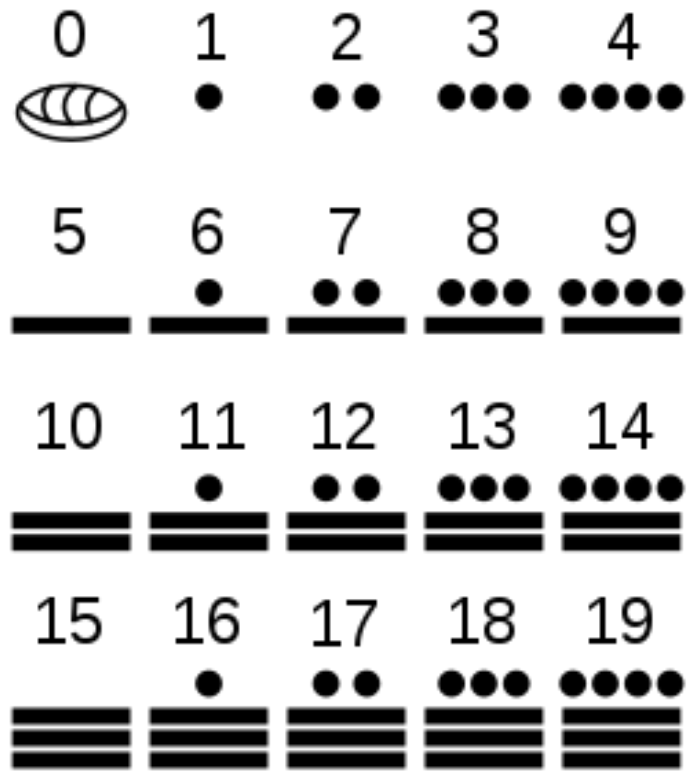
The Mayan written language was used as the basis for the Aztec language.



A section of the Paris Codex, one of the few books written by the Maya that survived the Spanish conquest of Central America in the 1500s.

# Exhibit F: Advances in Science and Mathematics

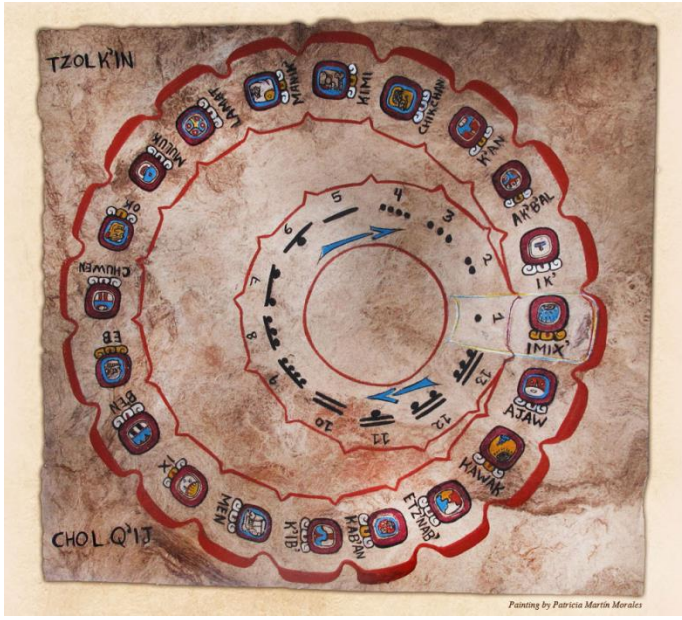
## Advances in Mathematics



An image showing the dot and line system for representing numbers used by the Maya.

In order to build their temples and construct their calendars, the Maya needed an advanced understanding of mathematics. As evidence of that achievement, they developed their own number system which included the concept of zero, something that few civilizations in the Eastern Hemisphere discovered on their own.

## The Mayan Calendar



A recreation of part of the Mayan calendar system.

The Maya used two calendars together to create an accurate way to measure the passage of time. The Haab is a calendar of 365 days in an 18 month period of 20 days each, and the Tzolkin which is a sacred calendar of 260 days divided into three groups of 20 day months. These two calendars are used together like gears in a machine in what is called a Calendar Round which lasted 52 years. There was also a Long Calendar that measured time over the course of hundreds of years.

To construct these calendars, the Maya needed advanced knowledge of astronomy that helped them predict the movements of the planets and the rotation of the Earth around the sun.



# What led to the decline of the Mayan Civilization?

**Introduction:** Between 800 and 925 CE, the golden age of Maya civilization collapsed. People abandoned the great city-states in what is today southern Mexico, Guatemala, Honduras, El Salvador and Belize. The pyramids and palaces built during the golden age became ruins, overgrown by the jungles. Scholars are still trying to figure out what led to the decline of this civilization.

## What Scholars Know About the Decline of the Mayan Civilization

- Trade between city states declined
- War between city states increased
- Death rates increased
- No new buildings were constructed after 830 CE
- No dates were recorded on monuments after 910 CE
- People left cities
- Similar declines happened in the Mayan past, but the civilization always recovered
- The decline was not sudden, it took place over 150 years

While there are still many debates of about the decline of the Mayan Civilization, most scholars agree that there were three main factors that contributed to the collapse.

- **Overpopulation**
  - **Drought**
  - **Warfare**

# What led to the decline of the Mayan Civilization?

**Directions:** Read the information below and watch the videos linked then answer the questions that follow.

## OVERPOPULATION



Map of Mayan Cities where most of the population lived.

The time period from 250-900 CE is considered the Classical Age of Mayan Civilization, its golden age. During this time, there is evidence of prosperity in the Mayan city-state as can be seen by the architectural, scientific, and artistic achievements, evidence of increased trade between city-states, and the establishment of large cities.

Increases in population usually accompany a civilization's golden age. As a result of findings in 2018, scholars now estimate that as many as 10 million people may have lived in the Mayan Civilization. They also estimate that 95 percent of the land in the region was drained to make farmland to feed the great population. Some suspect that the size of the population put a strain on the land and its ability to produce food for the Mayan people.

- 1. What effects did overpopulation have on farming in the Mayan civilization?**
- 2. How might overpopulation have contributed to the decline of the Mayan civilization?**

# DROUGHT

3. Watch [this video on the sources scholars use to determine that drought contributed to the decline of the Mayan Civilization \(2:00-end\)](#) and fill out the chart below.

Source	Findings Based on Evidence Gathered from Source
Tree Rings in Sweden	
Ice Cores from the Arctic	
Mayan Hieroglyphics	
Core Sample, Snail Shells, and Seeds from a Central American Lake	

4. What effects would drought have had on the people living in the Mayan City-States?

5. How might drought have contributed to the decline of the Mayan civilization?

# WARFARE



Warfare between Mayan city states increased between 800 and 925 CE as the civilization declined as evidenced by an increase in the building of protective walls and large number of arrow heads produced during the period.

Warfare may have increased because of competition over scarce resources like farmland and water which was made worse because of overpopulation and drought.

Reproduction of Mayan murals showing conflicts between Mayan city states.



Obsidian arrowheads found in Guatemala from the Mayan Civilization.

**6. What might be the connection between overpopulation, drought, and warfare?**

**7. How might warfare have contributed to the decline of the Mayan civilization?**





# Checkpoint

What were the accomplishments of the Mayas?

# Aztec (1345-1521)



- Empire in Mexico
- Tenochtitlan-capital
- Absolute emperor
- Militaristic
- Mostly slaves
- Polytheistic

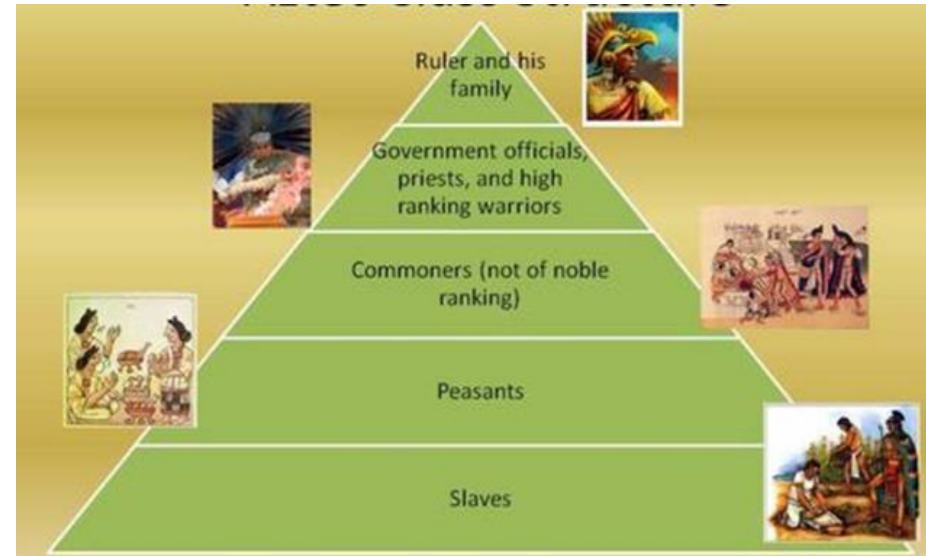
Beating hearts to Huitzilopochtli



Huitzilopochtli  
Sun god  
Beating heart offering



- Achievements
  - dental cavities
  - [Engineering \(capital\)](#)
  - **Chinampas**
- Conquered by Spanish



Their city was built on chinampas. Engineers combined 2 islands in Lake Texcoco & connected it to mainland through stone ramps (bridge)  
Present-Day Mexico-City is built on top of this city.



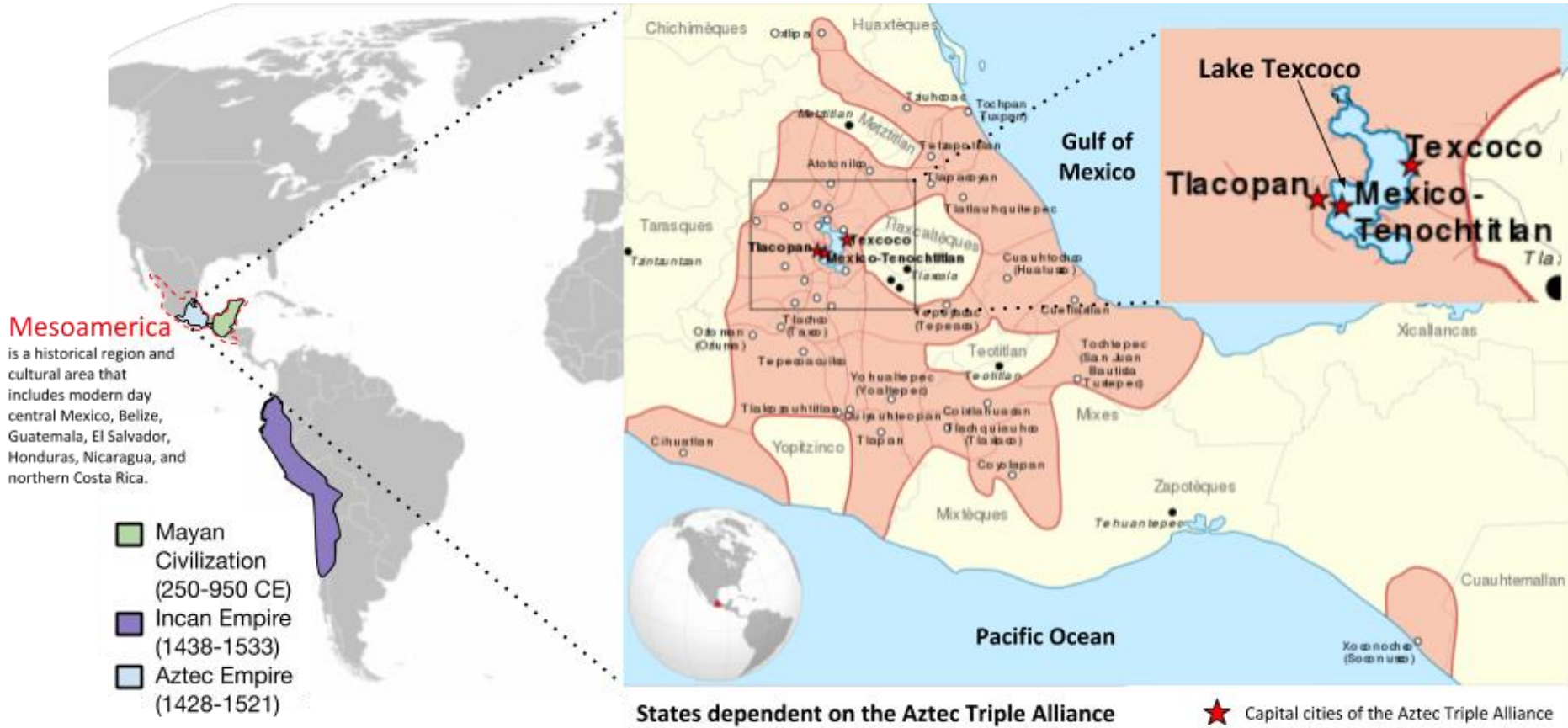
## Tenochtitlan

An Aztec legend said that when the people found their new home they would see an eagle perched on a cactus holding a snake. They saw this in lake Texcoco.





# Where was the Aztec Empire?



1. On which continent was the Aztec Empire located?

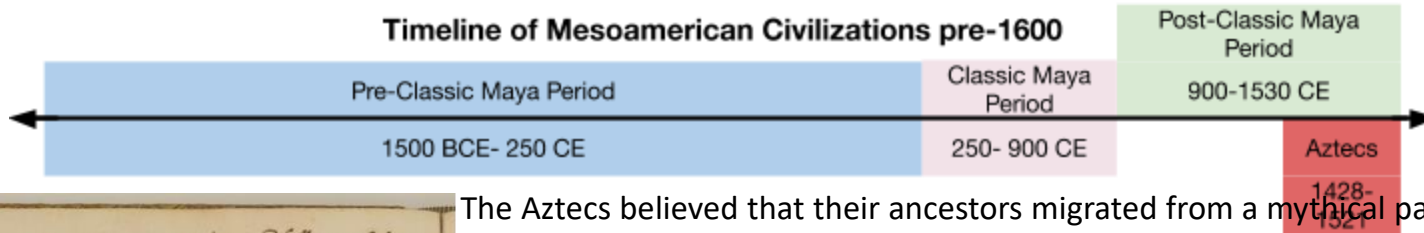
2. Identify three bodies of water that were located near the Aztec Empire.

3. Which civilization which had already experienced its rise and fall was most likely to influence Aztec culture? Why?



# What were the historical circumstances that led to the rise of the Aztec Empire?

**Directions:** Examine the timeline and read the text below, then watch an excerpt from the [History Channel's The Aztecs: Engineering an Empire](#) (1:25-6:50) that discusses the Aztec story for the beginning of their empire.



An image from the Tovar Codex of the eagle perched atop a cactus on an island in the middle of Lake Texcoco.

The Aztecs believed that their ancestors migrated from a mythical paradise called far northwest of Valley of Mexico where the Aztecs settled. These ancestors, according to the Aztec story, were guided by the god Huitzilopochtli who told them to look for an eagle perched on a cactus and to build their home there. They saw this sign on an island in the middle of Lake Texcoco in what is today Mexico City.

Historians have come up with other claims as to the rise of the Aztec Empire that do not involve the influence of gods. They believe that sometime around 1100 CE, city-states that existed in the central Mexico region competed with each other for scarce resources and power. Over the course of several hundred years, the city states of Texcoco and Tepenec rose to dominance and went to war in 1428. The Texcoco defeated the Tepenec because they formed an alliance with another city-state called Tenochtitlan, which was later joined by a formerly Tepanec city called Tlacopan. Texcoco, Tenochtitlan, and Tlacopan became known as the Triple Alliance, who together formed the Aztec Empire.

Eventually, Tenochtitlan, the city that the Aztecs build on an island in the middle of Lake Texcoco became the most powerful of the three cities, the capital of the Aztec Empire, and its ruler was referred to as the supreme ruler, or the *huey tlatoque* ('high king').

- 1. What is different about the Aztec story for the founding of their empire and the story historians have constructed?**
- 2. Why did the city states in Central Mexico go to war against one another?**

# How did the Aztecs innovate to meet their needs?

The Aztecs built their civilization on islands in Lake Texcoco.

Their capital was called **Tenochtitlán**.

+

What are the advantages of building your civilization on an island in a lake?

-

What are the disadvantages of building your civilization on an island in a lake?

The Basin of Mexico Circa 1519



# How did the Aztecs innovate to meet their needs?

## How did the Aztecs innovate to build Tenochtitlan?

**Directions:** Watch [The Aztecs: Engineering an Empire](#) (3:10-10:27, 13:22-14:46, 17:02- 19:22) and read the text below, then answer the questions below.



Painting of what Tenochtitlan might have looked like during the Aztec Empire. One of the causeways leading to the Temple of the Sun is depicted in the center of the image.

**1. What challenges did the Aztecs face building their city Tenochtitlan on the islands in Lake Texcoco?**

**2. How did the Aztecs adapt to the difficulties of building a city in Lake Texcoco? How did they prevent their buildings from sinking into the lake?**

**3. How did the Aztecs move building materials?**

**4. How did the Aztecs bring freshwater to Tenochtitlan?**

**5. How did the Aztecs prevent flooding in Tenochtitlan?**



# How did the Aztecs innovate to meet their needs?

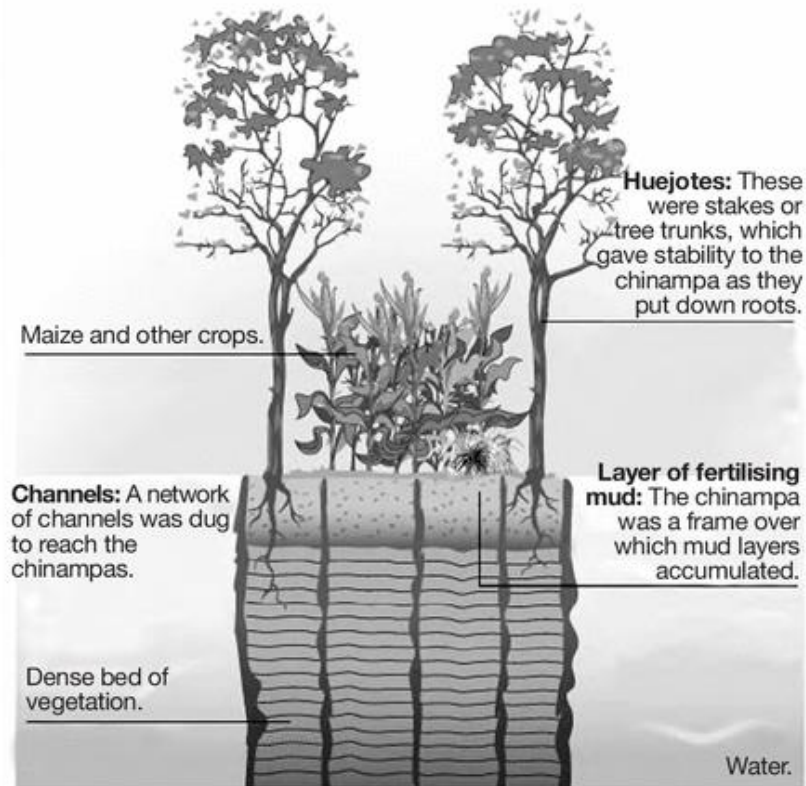
## How did the Aztecs innovate to feed the people who lived in Tenochtitlan?

**Directions:** After watching from 19:25 to 21:21 in [The Aztecs: Engineering an Empire](#), examining the document below on the left, and reading the document below on the right, answer the questions at the end of this table.

### Aztec Farming Method

#### The chinampas

These were real floating gardens which made it possible to create areas for cultivation in the shallow parts of the lakes.



Source: [www.icarito.cl](http://www.icarito.cl) (adapted)

... Chinampas added both living and agricultural space to the island. Houses could be built on chinampas after they were firmly in place, and the plots were used to grow a great variety of products, from maize and beans to tomatoes and flowers. The Mexica [Aztec] built chinampas all around Tenochtitlan, like their neighbors in the freshwater lakes to the south. They were, however, constantly faced with the danger of flooding, which brought salty water across the chinampas and ruined the land and crops. Lake Texcoco accumulated minerals from the river water running into it, which caused the water to be brackish [mix of fresh and salt water]. In the mid-15th century, this problem was solved; a dike was built, separating the western section of the lake where Tenochtitlan was located and protecting the city from salty water and some flooding....

1. What challenges did the Aztecs' environment pose for farmers?
2. What were chinampas?
3. How did the Aztecs build them?
4. How did the Aztec benefit from the chinampas?



# How did the Aztecs innovate to meet their needs?

## A Look Ahead: Hundreds of Years After the Aztec Stabilized it, Mexico City is Sinking

**Directions:** After watching [Mexico City is Sinking](#) by Channel One News, answer the questions below.



Buildings in Mexico City whose foundations have changed because draining the subterranean aquifer the city gets its water from is causing it to sink.

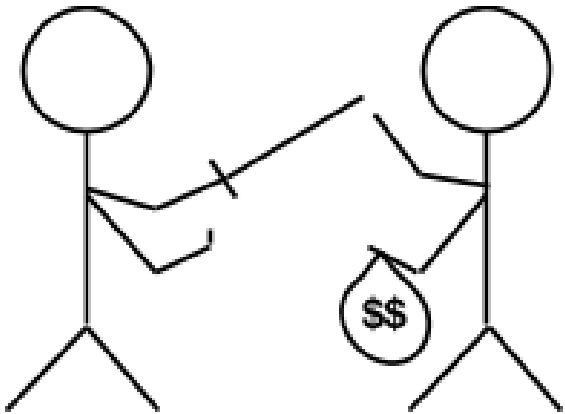
1. Why is Mexico City Sinking?
2. What are the effects of Mexico City's sinking?
3. What can Mexico City do to stop it from sinking?
4. How are Mexico City's modern day issues similar and different to issues the Aztecs had when building Tenochtitlan?

# How did the Aztecs gain, consolidate, and maintain power?

**Directions:** Use the Documents below to gather evidence to answer the question: How did the Aztecs gain, consolidate, and maintain power?

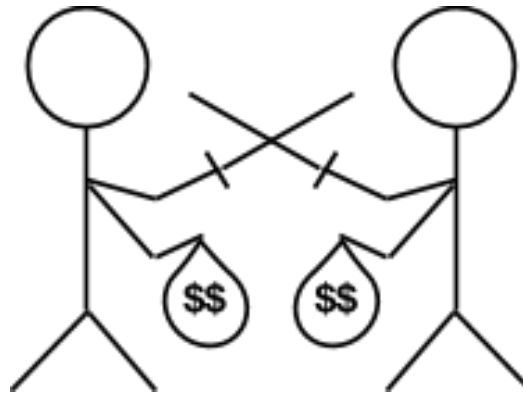
## GAIN

**Gaining power** is the process of getting it and expanding it.



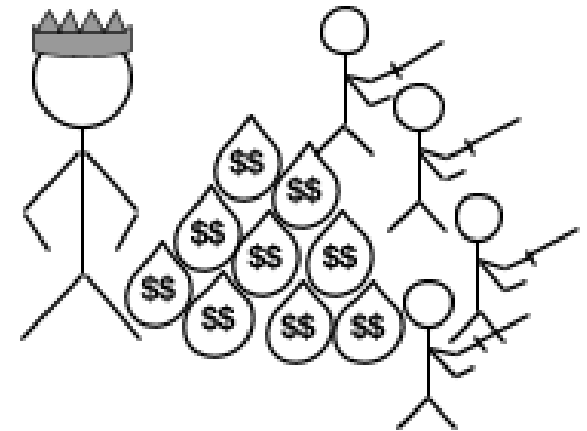
## CONSOLIDATE

**Consolidating power** is the process of taking control from other people who also have power.



## MAINTAIN

**Maintaining power** is the process of keeping one's power.



## **Document 1: *Tenochtitlan, the Cactus Rock***

### **Creating Allies With Neighboring Cities**

In 1440 the fifth chief of the Aztecs came to rule Tenochtitlan. The Mexica now dominated the whole of the Valley of Mexico, and had allied themselves with the neighboring cities of Texcoco (Tesh-koh-koh) and Tlacopan (Tlah-koh-pahn).

### **Marrying Pure Toltec Brides**

Their chiefs had sought out princesses of pure Toltec descent as their brides, so that they could inherit the divine right to rule, which belonged to the descendants of Quetzalcoatl. The new ruler of the Aztecs was given the title of Huey Tlatcani (Ooeh-tlah-toh-ah-ni) or Great Speaker for the several tribes over whom he had dominion. His name was Moctecuzoma Ilhuicamina (Mock-teh-Koo-zoh-mah Eel-weeh-kah-mee-nah) , Noble Strong Arm, He Who Aims at the Sky.

### **The Military**

During his reign, the Aztec armies continued their conquests and were the first to reach the shores of the Mexican Gulf.

### **Rebuilding the Temple and Captive Sacrifices**

In 1484 the Great Speaker Tizoc (Tee-zohk), He who offers his own Blood to the Gods, laid the foundations for the rebuilding of the ancient temple to Huitzilopochtli. He took prisoners and sacrificed some to the gods. [...] Tizoc died before the temple was completed. [...] When the great temple was dedicated, he took 20,000 captives and had them all sacrificed in four days by eight teams of priests.





# Document 3a:

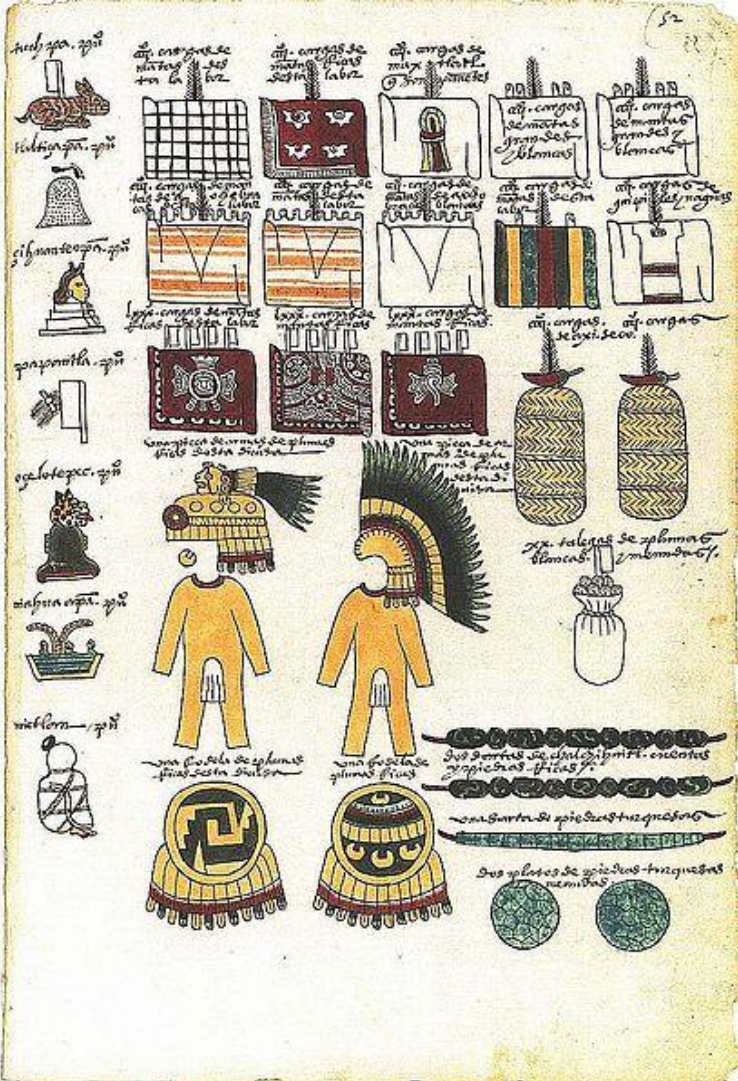
## The Aztec Tax Structure According to Michael E. Smith, archaeologist at Arizona State University

In an article entitled, "The Aztecs Paid Taxes, Not Tribute," archaeologist, Michael E. Smith writes:

*States interact with their subjects in two ways: they exploit people and they provide services. This has been true from the earliest states in Mesopotamia to the nation-states of today. Taxation is one of the primary means by which states exploit their citizens or subjects, and taxes provide the revenue for the services offered by states.*

According to Smith, inhabitants and the states they lived in paid regular taxes to the Triple Alliance (Tenochtitlan, Texcoco, and Tlacopan) that made up the Aztec empire. They made regular payments on specified dates according to the Aztec calendar. Some were paid once a year, others twice, and others four times per year. The taxes were collected by professional tax collectors and recorded in tax rolls.

The taxes were usually paid in cacao beans and **cotton mantas** (woven cloth), that the Aztecs used for money. Other goods supplemented the cacao beans and mantas based on the products produced in the region.



This page from the Codex Mendoza depicts what cities in the Aztec empire owed the government in taxes. The towns are listed on the left and the mantas and other goods they owe in taxes are drawn on the right.

**Document 3b:**

**The Aztec Tax Structure According to Michael E. Smith, archaeologist at Arizona State University**

**Aztec City States**  
**Areas conquered and governed by the Aztecs**

- Land Tax:** Calpolli paid taxes in the form of cotton mantas, cacao beans, firework, and foodstuffs based on the amount of land they farmed. Farmers kept most of their crop but had to send some of it to the king
- Rotational Labor:** Calpolli members were required to work for the king or nobles. Women spun and wove textiles while men often supplied firewood, swept, and carried water.
- Public Works Corvée:** Calpolli gave the labor of their members up to assist with building projects directed by the Aztec government like building aqueducts or temples.
- Military Corvée:** All young males had to serve in the military.
- Market Tax:** Government officials waited in guard huts at the market and took a portion of the goods as tax for being allowed to sell goods in the market.

**Conquest-States**  
**States that were conquered by the Aztecs**

- Allowed to be rule themselves as they had before in exchange for military loyalty and taxes

**Not Conquered States**  
**States that were not conquered by the Aztecs**

- received military support from the Aztecs in return for gifts



## Document 4: Aztec Sun Sacrifices

*The Custom of Sacrificing the Heart and Offering It to the Gods*



[The Aztecs believed that] all the time the sun was thirsting from the great internal heat. So he had to be nourished and cooled by offerings of the red cactus-fruit (which meant human hearts and blood). Only a very few had to be sacrificed to keep the sun moving in the sky, but the sacrifice must never be neglected or the human race would die from the fire caused by a motionless sun.

The Tovar Codex, attributed to the 16th-century Mexican Jesuit Juan de Tovar, contains detailed information about the rites and ceremonies of the Aztecs (also known as Mexica). The codex is illustrated with 51 full-page paintings in watercolor.[...] This illustration, from the second section, depicts a human sacrifice. An anonymous priest holding a spear presides over the sacrifice of a man whose heart is removed by an assistant. In the background, another assistant on the steps of a temple or pyramid holds an incense burner. The offering of the victim's heart to the gods satisfied the Aztec belief that the sun would rise again nourished by the hearts of men. The *Texochiyaoyotl* (Flower Wars) were conducted to capture prisoners for the sacrificial offerings needed for the gods.

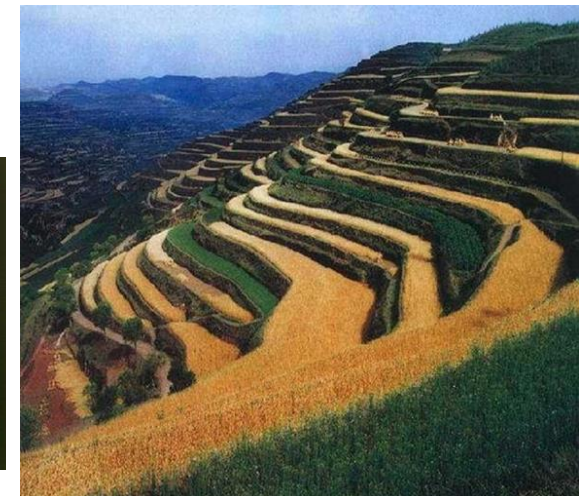
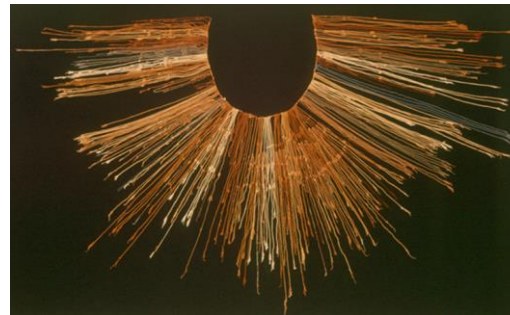
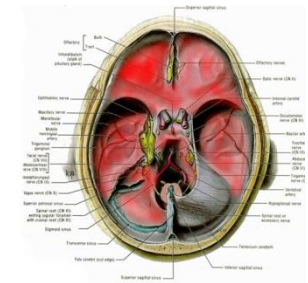


## **Checkpoint**

How did religion play a major role in Aztec society?

# Inca (1438-1533)

- Empire in Andes Mts.
- Gov't
  - Absolute divine ruler
  - controlling
- Polytheistic
  - Animism
- Achievements
  - [Architecture-Machu Picchu](#)
  - roads
  - Terrace Farming
  - **Quipus**
  - Skull surgery
- Conquered by Spanish





# Great Builders

They had great buildings made of stone held without mortar. Their roads also show their ability as great builders.

## Machu Picchu

City built at 8,000 ft above sea level.

## Urubamba River

River below Machu Picchu





# Incan Roads



**Inca roads stretched from sea level to nearly 12,000 feet in elevation. Roads often followed natural features, such as valleys, ridgelines, and the coastline.**

**Since the Incas had no wheeled vehicles, some of their roads had steps cut into the hillsides for people and animals.**

**The Incas were expert stone workers. They cut huge blocks of stones and fit them together so well that they didn't need any cement.**

**Important messages were carried by official runners. Each would run about two miles and then pass the message on to the next runner. Using this system, the Incas could send a message 150 miles in one day.**

**Many roads were just three to six feet wide, but that was wide enough for people on foot and for llamas, which the Incas used as pack animals.**

**Inca engineers built rope bridges to cross the valleys of the Andes Mountains. Rope bridges could stretch more than 200 feet across high gorges.**

**The Incas' vast empire was connected by a road network of about 25,000 miles of roads—enough to circle the earth.**

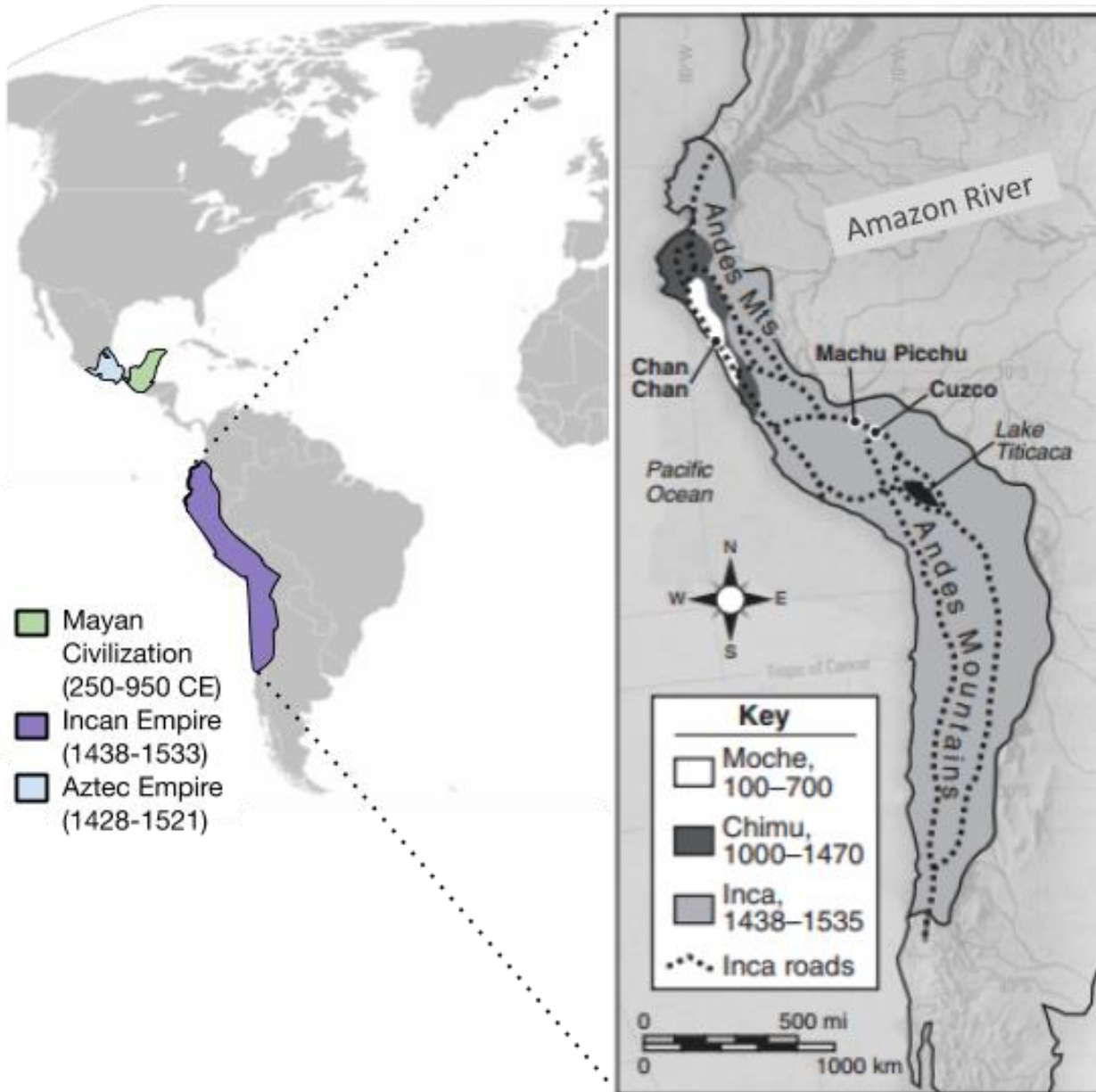
**Map Labels:** Cuzco, Machu Picchu, Cuzco, 14,000 ft., 8,000 ft., Sea Level, SOUTH AMERICA, Cuzco, Quito, Quito, Machu Picchu, Cuzco, Lima, Chalcabuco, Pacific Ocean.

**Map Legend:** Road, City

**Map Scale:** 0 500 1,000 Miles / 0 500 1,000 Kilometers

# Where was the Inca Empire?

**Directions:** Examine the map below and answer the questions on this and the following page.



1. On which continent was the Inca Empire located?

2. Identify two bodies of water located in or near the Inca Empire.

3. Which mountain range was located in the Inca Empire?

4. Identify two civilizations that existed before the Inca in the Andean region



# What were the historical circumstances that led to the rise of the Inca Empire?

**Directions:** Watch an excerpt of the TED-Ed video, "[The Rise and Fall of the Inca Empire \(0:00-2:20\)](#)" and read the text below, then answer the questions that follow.

The Inca civilization lasted from around 1400 to 1533 CE. It was located in western South America in modern-day Peru, and parts of modern-day Ecuador, Bolivia, Argentina, Chile, and Colombia. The Inca built the largest empire ever in the Americas and it was the largest empire in the world at its height.

As is true with the Aztecs, the historical and mythical beginnings of the Inca Empire can be difficult for historians to separate. Archaeological evidence suggests that the Cuzco Valley, where the Inca civilization started, was first visited by hunters and gatherers around 4500 BCE, but the area did not become an important center of power until between 1000-1400 CE. The Inca became the dominant group in the region when the empire's first powerful leader, Pachacuti Inca Yupanqui, led the Inca to defeat their rivals, the Chanca in 1438.

Led by Pachacuti and his descendants, the empire expanded quickly. The Inca used their military to gain control of new territories, and consolidated and maintained their power with the use of large building projects to construct bridges and roads, create a tax system that fueled the government, and establish a system of administration that kept the empire running despite its large size.

At its height, the Inca Empire stretched 3,400 miles from north to south and included 10 million subjects who spoke 30 different languages and were ruled by a relatively small 40,000 Inca.



A statue of Pachacuti Inca Yupanqui in Aguas Calientes, Peru.

**1. Identify three events or characteristics of the Inca empire that led to its rise.**



# How did the Inca innovate to meet their needs?

**Directions:** Examine the images on this page, then complete the chart below.

The Inca built their civilization in the **Andes Mountains**.

+

What are the advantages of building a civilization in the mountains?

-

What are the disadvantages of building a civilization in the mountains?



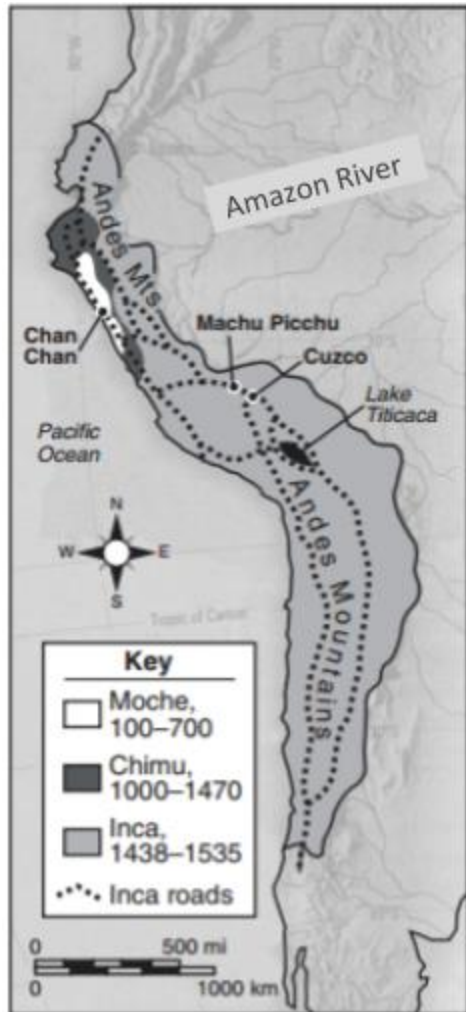
Urubamba Valley, Sacred Valley of the Inca, Peru



Machu Picchu, Inca City, Peru

# What was the geographic context of the Inca Empire?

**Directions:** Examine the images and text on the following pages, then answer the accompanying questions.



Since the Inca Empire controlled an area that included the Pacific Ocean coast in the west, the heights of the Andes Mountains in the center, and the Amazon River Basin to the east, its people lived in a wide variety of geographic contexts with different climates, animal and plant life, and geographic features. Each of these regions provided advantages and disadvantages for the Inca who lived there.

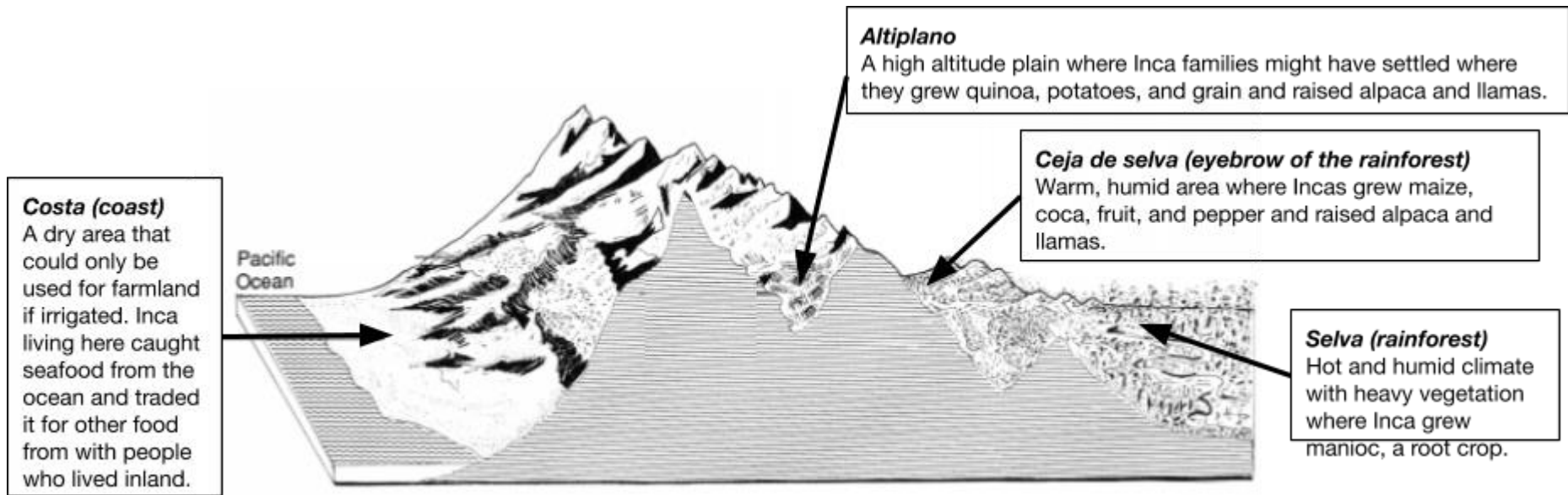
Though the Pacific Ocean provides food from plant life in the sea, fish, birds, and sea mammals, on land, the coast is a desert-like climate where it is difficult to grow food. The Andes are high, rugged mountains, that have cold snow capped peaks, as well as fertile river valleys, and plateaus that are good for agriculture. Although, prone to earthquakes living in the mountains can be unpredictable.

The rainforest in the Amazon River Basin is a humid place with this vegetation. It is good for growing tropical crops, but large-scale agriculture is difficult in the rainforest.

**1. What challenges did the Inca face because of their geographic context?**



# How did the Inca innovate to meet their needs?



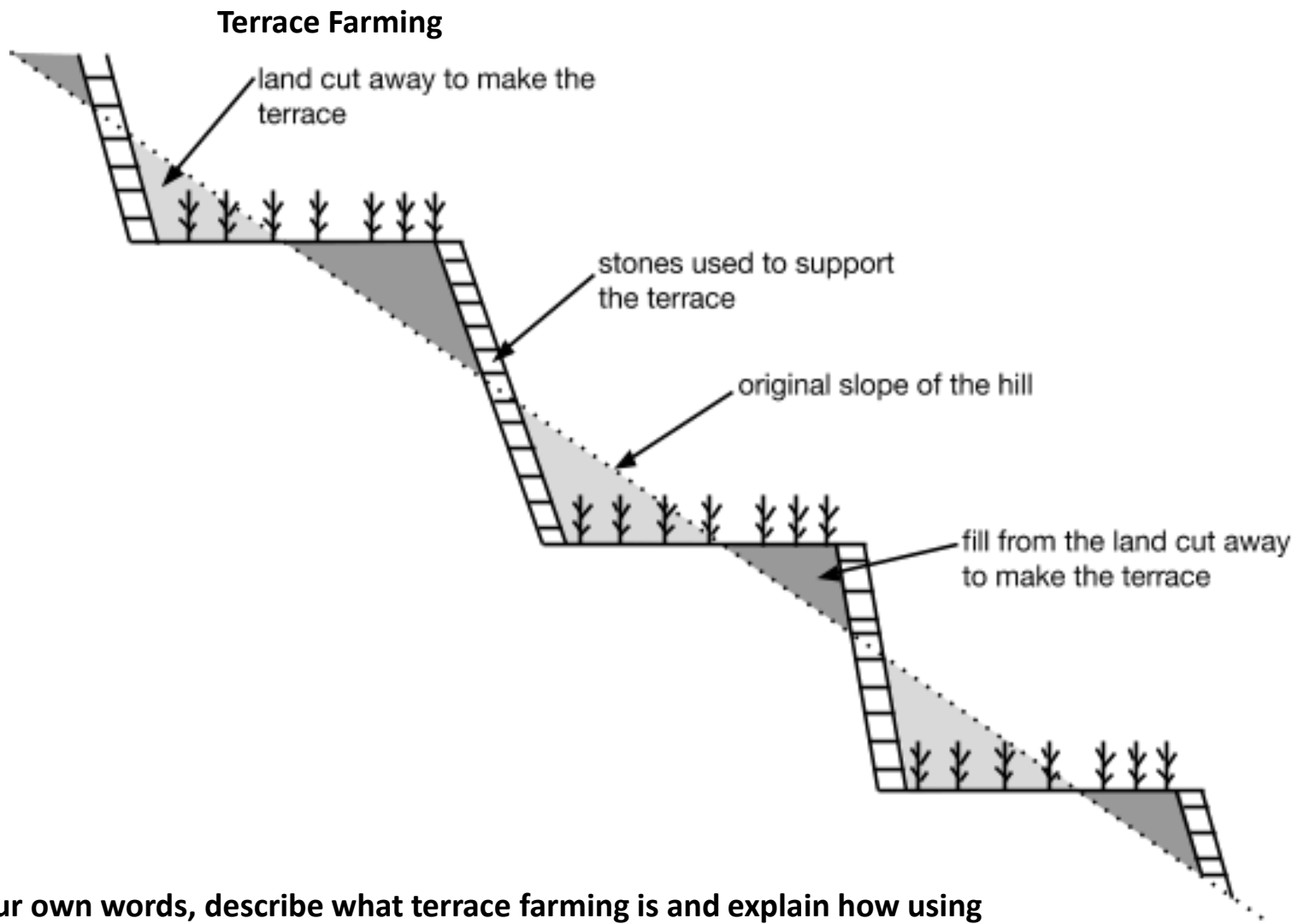
Although the rugged Andes Mountains create extreme weather conditions and make transportation difficult, they have hidden advantages that Andean people learned to **exploit**. The difference in altitude between the peaks created wide variations in temperature and rainfall at different **altitudes**. The **varying topography** of the mountains creates a variety of **ecological niches**, which are zones where different types of animals and plants can survive. So, instead of having to travel hundreds of miles to arrive in a different climate, Andean people can walk as little as 60 miles to go from a tropical forest in the lowlands to the frozen tundra of the highlands. Plants with different planting and harvesting times can be grown at different altitudes. Families farmed different plots of land at each altitude that might be two or three days apart by foot. This made it possible to have variety in their diet during the same season.

This system, called a “**vertical economy**,” has many advantages in the harsh Andean climate. First, it gives a community access to a wide variety of foods and other products. Second, it protects them against the impact of harsh and unpredictable weather conditions—if frost or drought destroys the crop at one elevation, the community can fall back on the harvest in another ecological niche. Andean farmers also plant several (sometimes dozens) of varieties of one crop like potatoes in a single field so that at least some plants will survive the season’s unpredictable temperature and rainfall.

**2. Based on the image & text above, identify 2 ways the Inca adapted to their environment to meet their needs.**

Watch a clip of the BBC documentary, [“The Inca: Masters of the Clouds” \(18:30-23:30\)](#) then examine the graphic below and answer the question at the bottom of this box.

As you watch the video clip take notes on how the Inca modified their environment to meet their needs in the column to the right.



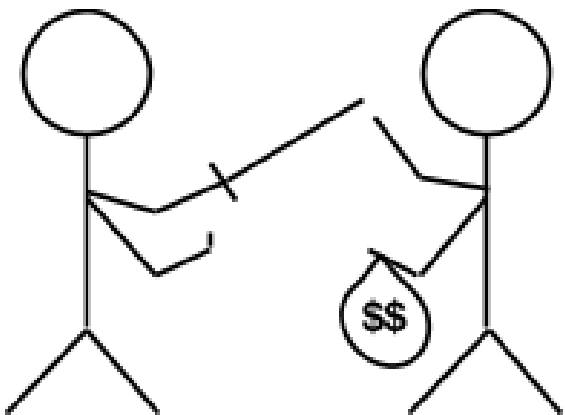
**3. In your own words, describe what terrace farming is and explain how using terrace farming benefited the Inca.**



# How did the Inca gain, consolidate, and maintain power in their empire ?

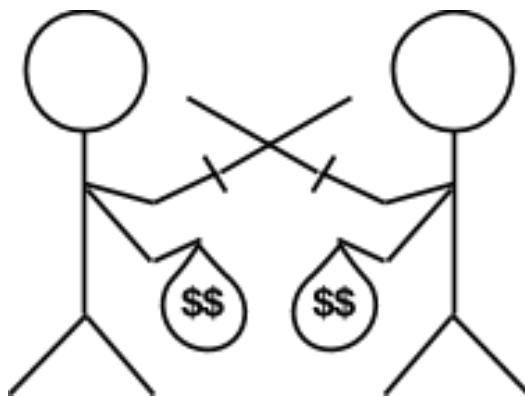
## GAIN

**Gaining power** is the process of getting it and expanding it.



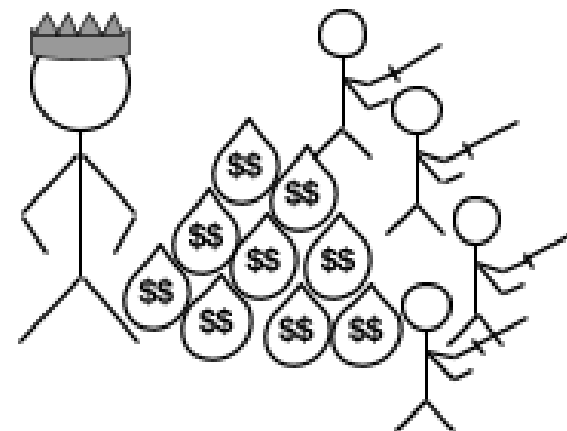
## CONSOLIDATE

**Consolidating power** is the process of taking control from other people who also have power.

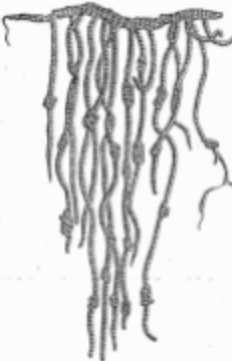



## MAINTAIN

**Maintaining power** is the process of keeping one's power.



**Directions:** Using information from [Machu Picchu: Unveiling the Mystery of the Incas](#) from the Peabody Museum of Natural History at Yale University, fill the chart below with information that answers the question: *How did the Inca gain, consolidate, and maintain power in their empire?*

Characteristic of the Inca Empire	Notes to help answer the question: How did the Inca gain, consolidate, and maintain power in their empire?
<p><b>Inca Hierarchy</b> (Section 8b, p. 14)</p>	
<p><b>The Mita System</b> (Section 8f, p. 16)</p>	
<p><b>Land Ownership</b> (Section 8d, p. 15)</p>	
<p><b>Quipu</b> (Section 8g, p. 16-17)</p> <p>For more information, <a href="#">what this video from National Geographic about Quipu.</a></p>	 <p>Drawing of a Quipu</p>
<p><b>Inca Religion</b> (Section 8h, p. 17-18)</p>	

# Inca Roads

Watch [this clip of a Discovery documentary](#) and [this Atlas Obscura video about the Inca use of grass woven bridges](#), read the document below and examine the map, then answer the questions.

..We can only marvel at the ability of the Sapa Inca [chief ruler] to control his vast domains, separated as they were not only by long distances, but by dramatic changes in altitude. Inca engineers developed a massive road system over some of the most rugged terrain on earth, a lattice [network] of highways and tracks that covered a staggering 19,000 miles (30,000 km). The Inca empire could never have been created without this communication system that carried important officials, government correspondence, entire armies, and all manner of commodities and trade goods. Road-building started long before Inca times, for earlier states like Chimor on the coast also needed to connect dense concentrations of farmers in widely separated valleys. But the Incas vastly extended the network...Anthropologist John Murra has called these roads the “flag” of the Inca state, for they were a highly visible link between the individual and the remote central government....



1. What techniques did the Inca use to build the Inca roads?
2. What were the Inca roads used for?
3. How did the Inca roads help the government consolidate and maintain power?



## **Checkpoint**

How did Incan government unify and control their empire?



## Aztec, Maya, Inca Comparison Chart

	<b>Aztec</b>	<b>Maya</b>	<b>Inca</b>
<b>Location</b>	Central America, Mexico	Central America	South America, along the Andes
<b>Time Periods</b>	1200 to 1521	400BC-1517AD Height: 200-900AD	1200-1572AD
<b>Capital</b>	Tenochtitlan	Tikal, Chichen Itza, Copan, Palenque, Mayapan	Cuzco
<b>Economy</b>	Farming (corn, beans, tomatoes, squash) - chinampas	Farming (corn, beans, squash) Trade	Farming (corn, cotton, potatoes) - Terraces
<b>Religion</b>	Many gods, sun god most important, human sacrifice	Many gods, king's blood is sacred, sacrificed animals and some humans	Many gods, some human sacrifice
<b>Social System</b>	Different classes of people, warriors have high social status	Different classes of people	Different classes of people
<b>Government</b>	Very powerful king, highly centralized, war was for captives and tribute	Well organized city states each with a king, war was for tribute	King at the center of empire, War is for conquest
<b>Technology</b>	Built monumental architecture, chinampas, calendar	Writing, math, monumental architecture, calendar	Terraces, irrigation, medicine, monumental architecture, roads
<b>End of Civilization</b>	Cortes and the Spanish kill the king, the empire ended	Abandoned cities, disappeared	Civil war and Spanish invasion
<b>Contributions</b>	Corn, calendar, architecture	Calendar, corn, writing, math, architecture	Medicine, irrigation, terraces