The 2016 packet contains these one-page explanations and student activities:

GeoHistoGram black and white for reference while reading this list

Background about the GeoHistoGram - a graphic aid to help organize knowledge Uses for the GeoHistoGram - ways to use the graphic organizer in and out of class

Basic structure of the GeoHistoGram - logic of the design of this graphic organizer GeoHistoGram blank form - reproducible master of the basic graphic organizer

Simple 12-empire version – a useful "starter" on the scaffold up to the poster version Empires and rulers in different world regions - the colors of the main "blobs"

Key reference points on the GeoHistoGram - adding your own major "anchor points" Major historical eras on the GeoHistoGram - aligning with the Michigan GLCEs

Cultural leaders in history - a dozen key figures Inter-regional "bridges" in history - trips that changed the world

From barter to the Silk Roads - the GeoHistory of trade, part 1 Trading germs - the GeoHistory of Disease epidemics

The GeoHistory of religion - beliefs about how the world should be Iconic buildings - the GeoHistory of monumental structures

Gather it wild or grow your own - the origins of agriculture in different world regions The geography of important inventions – ideas that made places into winners and losers

Wooden clubs and iron swords - the role of iron in regional history Revolutions and Rebellions - revolts against colonial masters throughout history

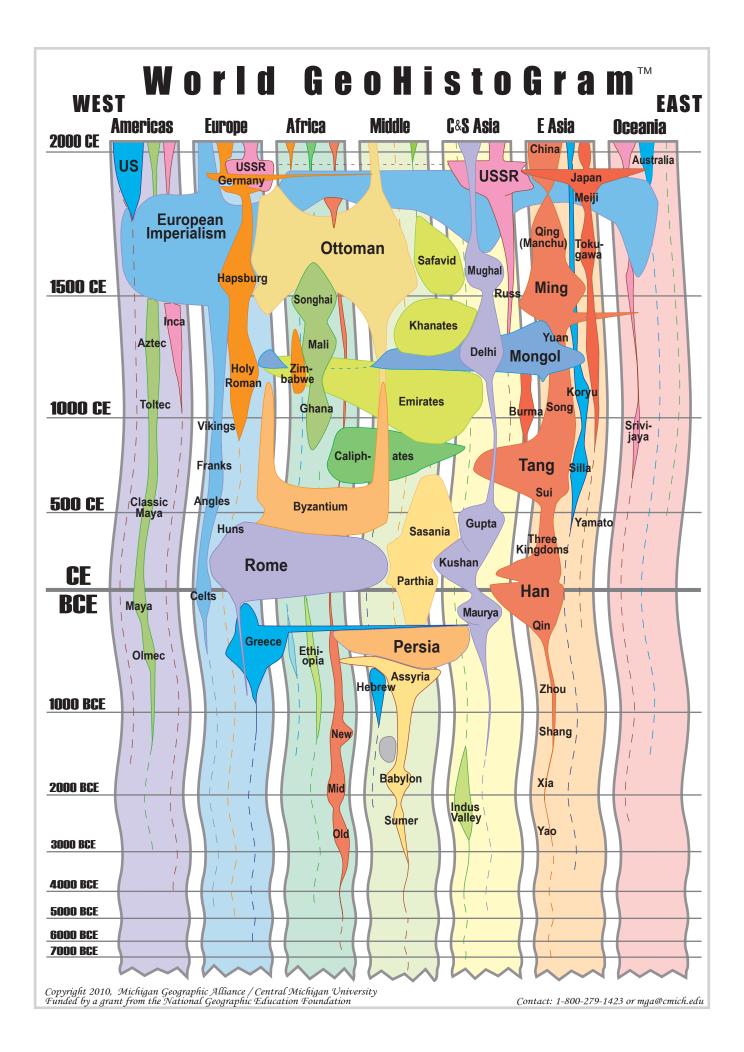
Climate on the GeoHistoGram - weather events that changed history Famine, disease, and war - consequences of climate change?

Turning points in history - 15 key moments and their space-time context Turning point version of the GeoHistoGram

Genocide on the GeoHistoGram - a dozen examples of what might be genocide Using a GeoHistoGram to answer document-based questions

GeoHistoGram Bingo form and prompt questions

GeoHistoGram FAQs - frequently asked questions about using the graphic organizer



# Background About the GeoHistoGram

The GeoHistoGram is a teacher-tested, neurologically sound graphic organizer to help students put historic events into geographical and historical context.

This diagram is <u>not</u> a uniquely effective way to <u>present</u> knowledge, but it is a terrific way to <u>organize</u> knowledge.

By marking (or even just pointing to) a place on the GeoHistoGram as they read, think, and talk about an event, students encode a general idea of its position relative to other events, even though they may not remember the precise date and place.

For that reason, the GeoHistoGram is especially valuable if used frequently, often for only a few seconds at a time, to help put events into perspective.

Occasionally, however, it can also serve as the basis for a class activity, as outlined on these pages. Each time a student locates an event on the diagram, it reinforces the knowledge that has already been entered, by providing both a visual review and another set of links to help solidify the memory. See the Powerpoint introduction in this folder for additional background and application ideas.

Many of the activities on the following pages were developed as examples by teams of teachers and scholars on the GeoHistory Project. This project was administered by the Michigan Geographic Alliance, with collaborators in Texas, Mississippi, and New York, and partial funding from the National Geographic Society. For more information about additional products from this project, check the website of the Michigan Geographical Alliance or email mga@cmich.edu.

In addition to the topics suggested in the following activity pages, teachers and students can add many other themes to the GeoHistoGram. These additional topics might include:

significant invasions, battles, treaties, or diplomatic marriages;

notable speeches or writings, proclamations, media events;

landmarks in women's rights, strikes or other labor actions;

scientific discoveries, inventions, research labs;

extinctions, endangered species, pollution events, diseases;

bridges or canals, walls, parks, malls, commemorative statues, other buildings paintings, sculptures, or musical compositions (especially ones with strong cultural or political implications, such as the Drinking Gourd song or Sibelius' *Finlandia*)

In short, the scope of the GeoHistoGram is limited only by your imagination and the topics in your state curriculum. Each time a topic is added, the GeoHistoGram helps students see how that topic is related to other topics already covered (such as empires, inventions, explorers' travels, or religions).

# Americas

EAST Decenia

#### Uses of the GeoHistoGram

The GeoHistoGram is a flexible graphic organizer that can be used to support manydifferent instructional strategies and activities.

- 1. It can be a means of communicating content knowledge.

  Give students a table or text that identifies the dates and places of key events. They plot those points of the GeoHistoGram and answer questions about them. The goal is to remember the specific events on the list.

  Examples: The origins of major religions, the dates of major voyages
- 2. It can help put other events into historic and geographic perspective.

  When you mention an event (in a reading, with a video, in a presentation), point to its position on the GeoHistoGram. It usually helps to make at least one other comment e.g., by naming what happened before or after it in that place, or in other places at the same time, or what it was inside.

  Examples: Muhammad's trip to Medina, the Second Siege of Vienna
- 3. It can summarize evidence to support or reject a hypothesis.

  Plot the first occurrence of something in different places. Examine the pattern to see if there were independent inventions in different places or a "flying geese" pattern that indicates spread from place to place.

  Examples: the spread of iron technology, the spread of Islam
- 4. It can be part of a poster or presentation to show the location and time.

  Copy the GeoHistoGram to the clipboard, add a symbol to mark your event, and put it in the poster or presentation to reinforce the text.

  Examples: part of a biography or a report on a great invention
- 5. It can be quick way to situate "trivia facts" from texts or the web.

  A typical regional history has hundreds of individual characters. Even with an engaging book, it can be hardto keep track of all the "players." If the book is not well written, dates and places might not be in a logical order. Briefly noting their position can help make this kind of text easier to read.

  Examples: Mughals, Marathas, Afghans, Dravidians, and Sikhs in South Asia; regional kings in the history of Timbuktu
- Mark the key events that you find useful in making your own mental timeline of events. Then look at other events that are mentioned in the standards and therefore are likely to be on the test. Try to describe the position of these events relative to the ones you have fixed in your head.

Examples: Using Columbus as your anchor point, put Vasco da Gama, Pizarro, Zheng He, and Leif Ericsson in relative position and state the relationship in your own words

7. It can be part of an assessment.

Make a small image of a GeoHistoGram, with or without labels. Put a symbol on the image and ask a question; or ask students to put a symbol on the image as part of their answer.

Examples: Hammurabi's Code, Luther's role in the Reformation

#### Basic Structure of the GeoHistoGram

A timeline is a way to visualize when and where something occurred. It can also tell you what else was going on in the world at the same time. Unfortunately, timelines in books often try to show too many details at once. To help us organize information, we will use a simple form to record the events that occurred at different times.

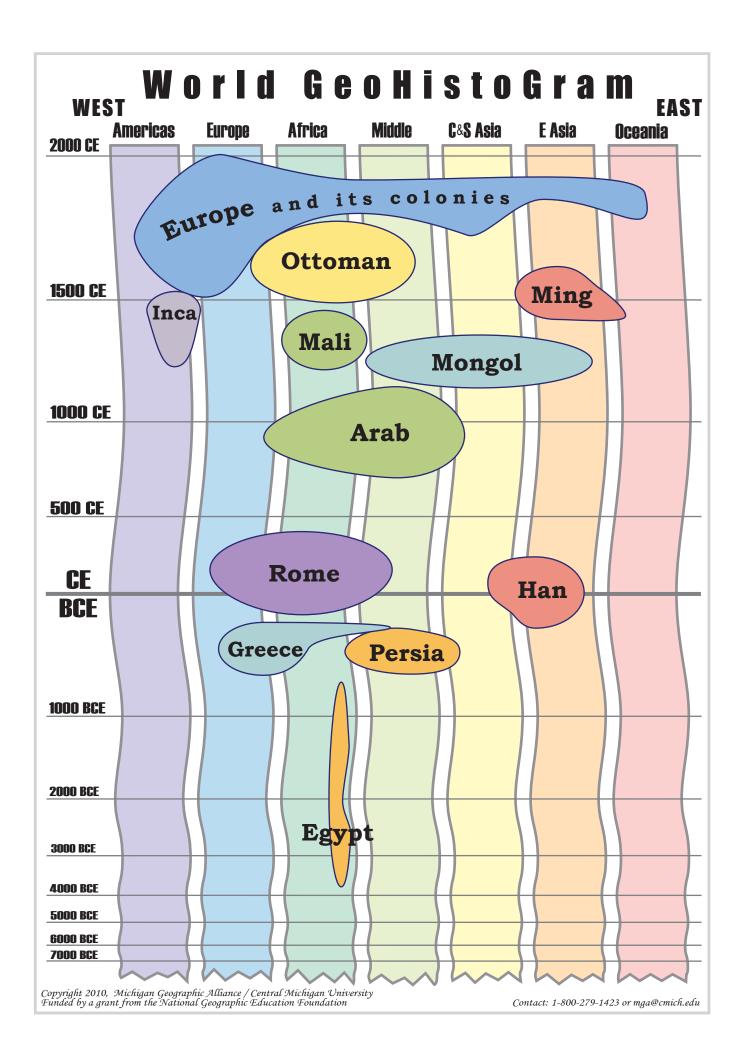
- The horizontal lines indicate dates. The oldest dates are near the bottom of the diagram. The timeline "stretches" as we get closer to the present. That lets us show more of the details that still influence our lives today.
- The long vertical boxes show major world regions. They are arranged in rough geographical order from west to east. The "Middle" includes countries like Iraq, Israel, Jordan, Syria, and Turkey. This area has been called the Fertile Crescent and the Crossroads of History. It is where farming first began, iron tools were first made, and cities were first built. It has also been an area of conflict for thousands of years, right up to the present day.

To see how to use the GeoHistory Diagram, let us add seven key events.

- 1. People first began planting crops for food in the area now called Turkey and Iran. This happened about 8000 years BCE ("Before the Common Era," the "Zero Line" that most people use for calendars). Draw a small oval to represent a crop seed in the Middle column about 8000 years ago. Later, you will add more symbols to the timeline to show how farming spread to other regions of the world.
- 2. The Great Pyramids of Egypt were built about 2500 BCE. Draw a triangle or pyramid on the right-hand side of Africa column about 2500 BCE. Later, you will add symbols to show other globally important buildings.
- 3. A Roman fleet crossed the Mediterranean Sea in 125 BCE and captured Carthage in northern Africa. This was a key event in the spread of the Roman Empire. Draw an arrow that goes from the Europe column to the Africa one, just below the "zero line" line that separates the BCE from the CE years. Later, you will add other invasions to the diagram.
- 4. The Prophet Muhammad traveled from Mecca to Medina in the year 622 CE (Year One in the Islamic calendar). Draw a crescent above the 500 CE line in the middle column. Later, you may add other key religious dates.
- **5**. Gunpowder was invented in China about 850 CE. Draw a small explosion in the second column from the right, just below the line for the year 1000. Later, you may add other important inventions to the diagram.
- **6**. Columbus sailed from Europe to the Americas in 1492. Draw a line to show that "bridge" between continents. Later, you may add more bridges to show the travels of other important explorers.
- 7. The United States declared independence from Britain in 1776. Draw a star at the appropriate place in the Americas column to note that event.

# World GeoHistoGram™ **WEST Americas Europe Africa** C&S Asia **E** Asia Middle Oceania **2000 CE 1500 CE 1000 CE 500 CE** CE **BCE 1000 BCE 2000 BCE 3000 BCE 4000 BCE 5000 BCE** 6000 BCE **7000 BCE** Copyright 2010, Michigan Geographic Alliance / Central Michigan University Funded by a grant from the National Geographic Education Foundation

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# Empires and Rulers in Different World Regions

A GeoHistory Diagram is a way to visualize when and where something occurred.

- The horizontal lines indicate dates, in thousands of years.
- The vertical columns show the major world regions.

ioo CE	at times when the empire controlled more territory. Write an appropriate word - pink, orange, yellow, green, blue, or purple - on each line below to show what color the diagram uses to show each empire described below:	
	Americas:	
	<u>Pink</u> South America, with villages at first and the Inca empire after 1000 CE <u>Blue</u> United States, as a colony at first and an independent country after 1776 <u>Green</u> Central America, with several empires over more than two thousand years	
	Europe:	
	Greece, an empire that briefly extended a long way into Central Asia The Holy Roman and Hapsburg empires in central Europe after 900 CE Britain, islands with a long history and a global empire in the late 1800s	
	Africa:	
GE	Three important empires in West Africa from about 800 to 1600 CE <u>Red</u> Egypt, with several kingdoms that started way back about 3000 BCE  Zimbabwe, a small but important empire in south Africa after 1000CE	
	Middle:	
BUE	Mesopotamia, location of several of the world's first empires  The Hebrew kingdom, at an important crossroads about 1000 BCE  The Persian empire, 600-400 BCE, one of the first multi-region empires  Various Emirates and Khanates from about 900 to 1500 CE	
	Central and South Asia:	
00 000	<ul> <li>Russia, a huge but cold area that became an empire after 900 CE</li> <li>the Indus Valley, site of an important civilization before 2000 BCE</li> <li>India, several different empires and rulers over 3000 years of history</li> </ul>	
OO BCE	East Asia:	
10 805	Japan, islands that developed powerful empires after about 1600 China, a large area ruled since at least 1500 BCE by a long line of dynasties Korea, with several different empires before and after 1000 CE	}
	Oceania: Indonesia, islands with several empires before European sailors came	
OO BCE	Indonesia, islands with several empires before European sailors came Australia, like the U.S., a British colony and then an independent country	
	many other islands, with individual histories but no major empires	
OO BCE	•	

EAST

Key Reference Points on the GeoHistoGram

A GeoHistory Diagram is a way to visualize when and where something occurred.

It can also tell you what else was going on in the world at the same time.

Unfortunately, timelines in books often try to show too many details at once. Worse, they do not always show things we already know. This is unfortunate, because we need this background knowledge to put new information in perspective.

In this activity, you will add some key "anchor points" to the diagram. Remember:

- The horizontal lines indicate dates. The oldest dates are near the bottom. The timeline gradually "stretches" as it gets closer to the present. This allows it to show more of the recent details that still influence our lives.
- The vertical columns show the major world regions. They are arranged in rough geographical order from west to east. In the middle is the area where farming first began, iron was first made, and cities were first built. It also has been an area of conflict for many thousands of years, right up to the present day.

Here are five key events that can serve as "anchor points":

What Happened	When It Happened	Where It Happened
Code of Hammurabi	about 1750 BCE	Babylon ("the Middle")
Caesar Augustus rules in Rom	ne "the zero line"	Rome, in Italy, in Europe
Muhammad conquers Mecca	630 CE	western Arabia (Middle)
Mongols conquer Xia (China)	1207	China (East Asia)
Columbus sails to America	1492	the Americas

Put a letter or symbol at the appropriate place on your GeoHistoGram to indicate each of those events. Think of several ways to describe where each one is.

Now pick 3-5 more events to put in some of the "empty" parts of your space-time form. For example, gunpowder was invented in China about 850 CE. To show that, draw a small explosion below the 1000 CE line in the second column from the right.

The graph can now help you remember other facts about East Asia, because they will be earlier than gunpowder, later than the Mongols, or between those events.

What Happened	When It Happened	Where It Happened	
 	<del></del>		

Your goal is to have 8-10 well-scattered space-time points always in your mind to help you organize new information in a way that makes it easier to remember.

A GeoHistory Diagram is a way to visualize when and where something occurred. It can also tell you what else was happening in the world at the same time.

In this activity, you will add some historical information to the diagram. Remember:

- The horizontal lines indicate dates. The oldest dates are near the bottom. The timeline gradually "stretches" as it gets closer to the present. This allows it to show more of the recent details that still influence our lives.
- The vertical columns show the major world regions. They are arranged in rough geographical order from west to east. The "Middle" is the area in southwest Asia where farming began and iron tools were first made.

According to the guidelines of the Michigan Department of Education,

the history of the world can be divided into 8 major eras:					
Era 8. 1945 - present	Cold War and its aftermath				
Era 7. 1900 CE - 1945 CE	global crisis and achievement				
Era 6. 1776 CE - 1914 CE	age of global revolutions				
Era 5. 15 <sup>th</sup> – 18 <sup>th</sup> centuries	first global age				
Era 4. 300 CE - 1500 CE	expanding hemispheric interactions				
Era 3. 1000 BCE - 300 CE	classical traditions and major empires				
Era 2. 4000 BCE - 1000 BCE	early civilizations and cultures				
Era 1. beginnings – 4000 BCE	the beginning of human society				
1: Draw horizontal lines in the appropriate positions on the GeoHistoGram to separate the eras. Write the names of the eras in the spaces between lines.					
2: Select two or three key events that you associate with each era.  Put dots at the appropriate positions on the GeoHistoGram to represent your selected events. Then write the name of each event next to its dot.					
3: Select seven key events that you think mark the divisions between eras. For example, you might choose the split of the Roman Empire into two parts (with capitals at Rome and Constantinople) as the event that marks the end of the classical empires era and beginning of the hemispheric interaction era.					
4: Write the number of the era in which each of these key events occurred:					
Declaration of Independence	Code of Hammurabi				
Great Pyramid in Egypt	Great Wall in China				
beginning of Islam	beginning of Christianity				
invention of steam engine	invention of iron forge				
bubonic plague in Europe	AIDS in Africa				

#### Americas F

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## Cultural Leaders in History

A GeoHistory Diagram is a way to visualize when and where something occurred. It can also tell you what else was going on in the world at the same time. Understanding these relationships is especially important when you are trying to evaluate the contributions of individual people. It is hard to put the work of one person into perspective unless you know what happened before, and what else was happening about the same time.

Here is a list of some important people, with the approximate date and the world region where they were important. The list is one person's opinion. For that reason, there are some blank lines at the bottom of the list, where you can add other names if you wish.

Charlemagne	800 CE	France	Martin Luther King	1970 CE	USA
Confucius	500 BCE	China	Martin Luther	1525 CE	Germany
Gautama Buddha	500 BCE	S. Asia	Mohandas Gandhi	1940 CE	India
Hammurabi	1750 BCE	Babylon	Muhammad	622 CE	Arabia
Mansa Musa	1300 CE	W. Africa	Plato	400 BCE	Arabia

Part 1. Add names of other people that you think are about as important (or even more important) than the names on the list. For each addition, write a brief reason on a separate piece of paper, so that you can defend your choice when asked.

Part 2. Pick 10-12 individuals that you think had the most influence on history. Write your reasons on a piece of paper so that you can defend your choices.

Part 3. Write the initials of each of those individuals in the appropriate position on the Geo-HistoGram. Compare this with other kinds of information on the diagram in order to put the individual into historical and geographical context. To start your comparison, you might ask yourself three questions:

What else was happening in other regions of the world at roughly the same time? What happened in the same region before your individual became important? What happened in the general area just after your individual left the scene?

# Inter-regional "Bridges" in History

At several key moments in history, people made journeys that linked major world regions in new ways. Depending on the circumstances, the links could lead to the spread of ideas, trade in food or other goods, and/or movement of people. Often, they made people richer at both ends of the connection. On the other hand, new links between world regions could also lead to war, disease, and death.

In short, you have to know something about conditions at both ends of a new connection in order to understand the consequences of the connection.

Here is some background information about 12 important "inter-regional bridges":

1300 BCE 325 BCE 200 BCE 125 BCE	Hebrews moved from Egypt to Palestine (the "Exodus") Alexander led an army from Greece to South Asia Polynesian people sailed from East Asia to Tahiti in the Pacific Ocean Romans crossed the Mediterranean Sea and conquered Carthage
150 CE 400 CE 711 CE 1099 CE	Sea traders traveled from India (in South Asia) to east Africa Huns came from central Asia and attacked Rome Moors from Morocco in north Africa invaded Spain Crusaders from Europe went to Palestine (also called Canaan, Israel)
1225 CE 1300 CE 1492 CE 1673 CE	Genghis Khan led an army from Mongolia across Asia to Europe Marco Polo traveled from Venice (in Europe) to China Columbus sailed across the Atlantic from Europe to the Americas Ottoman Turks advanced into Europe as far as Vienna

- f 1: For each inter-regional "bridge," look at the map and identify:
  - a. the source area the region where the movement began
  - b. the <u>destination</u> the region where the movement ended
  - c. the date the approximate time of the movement (You may need to use an atlas or the internet to find some of the places.)
- **2**: Go to the GeoHistoGram. For each "bridge" on the list:
  - a. put letter **S** at the place and time of the source.
  - b. put a letter **D** at the place and time of the destination
  - c. draw a curved line (like a bridge) to connect the source and destination
  - d. write the name of the leader or group of people who made that link
- 3: Write a paragraph to describe the general conditions before the connection occurred, in both the source and the destination areas. You might think of your paragraph as the first pages of a novel or TV show which will go on to tell the story about how some people tried to cope with the changes that occurred as a result of the new connection.

#### From Barter to the Silk Road - Early Trade on the GeoHistoGram

Around 430 BCE, the Greek writer Herodotus wrote about a beach in West Africa. Sailors from the Mediterranean Sea would sail out through the Strait of Gibraltar and south along the coast of Africa to this beach. There, they unloaded things from their ship - tools, clothing, jars of wine and olive oil, whatever they brought to trade. Then they started a fire and went back to their ship.

When the people on shore saw the smoke, they came and looked at the goods. They put some gold on the ground next to the goods and went back into the forest. When the sailors on the ship saw them leave, they came to the shore and looked at the gold. If they thought it was enough - a fair trade - they would take the gold and leave. If not, they would start another small fire and return to the ship. The people on shore could then decide if they wanted to add more gold to the pile.

Eventually, the sailors could decide to take the gold or to load their things back on the ship and go on to another beach.

This is one of the first written descriptions of long-distance trade. But it is far from the first example of long-distance trade. Other evidence - paintings, tools, pieces of metal, even stones - can help us see when and where people traded for things they could not find, grow, or make where they were. Here is a list of some of these trades. Mark the place and time of each trade on your GeoHistoGram. If a trade went from one world region to another, show that with a line that connects the two regions involved in the trade.

- 6000 BCE Obsidian a sharp volcanic glass from hills in the "Middle" is found in some ruins on the floodplain of Mesopotamia, 200 miles south.
- 3200 BCE Seashells from Oman, on the Persian Gulf, are found in Sumer, proving that the people of Sumer were rich enough to trade for decorations.
- 2500 BCE Perfume from trees that grow only on the Arabian Peninsula (in the Middle) is found in the ruins of the Old Kingdom in Egypt (in north Africa).
- 2000 BCE Tin from Cornwall (in the British Isles of northern Europe) is found in the ruins of factories in Sumer and Babylon (in ancient Mesopotamia).
- 1000 BCE The Hebrew king Solomon gets spices from India (in South Asia).
- 600 BCE Sailors from Egypt go all the way around Africa. (That's a long distance, but it stays in one world region – try to figure out a way to show that.)
- 300 BCE Mauryan sailors (from South Asia) bring silk cloth from Qin (China).
- 100 BCE Greek sailors (from southern Europe) sail to India to get spices AND Chinese trading expeditions go to Central Asia to get horses.
  - 1 BCE Silk from China is fashionable in Rome but Roman traders do not go all the way to China - traders in India and Parthia act as middlemen.

Find one more example of ancient trade and add it to your GeoHistoGram.

## Trading Germs - Disease on the GeoHistoGram

Traders bring more than goods and news; they also can carry diseases to places where people do not have natural immunity. Sometimes, they bring an especially serious form of a disease, which can spread rapidly through a population.

Note these times and places on your GeoHistoGram:

- ~1100 BCE The Bible describes a plague in Egypt, in north Africa. The disease is unknown, but it was probably not the Plague that came later.
  - ~500 BCE People from South China traveled to the crowded North China Plain and brought a deadly disease. It was probably the Plague. Millions died.
  - 450 BCE Traders on the Mediterranean carried disease from Africa to Greece.
  - 166 BCE Roman soldiers returning from Mesopotamia (Middle) had a disease. It killed many people in Rome. (It might have been smallpox.)
  - ~100 CE Ships began to go from China to South Asia. Science fact: Plague kills people in a few days, but Plague-carrying rats can live for several weeks. Rats and fleas rode ships and spread Plague to West India.
- ~300 CE Ships with better sails could cross the Arabian Sea faster.

  Plague-carrying rats reached southern Arabia, then Egypt.
- As barbarians invaded the Roman Empire, Byzantium (Constantinople) had to buy grain from Egypt. Plague-carrying rats rode grain ships across the Mediterranean. The disease killed nearly a third of the people in Constantinople. Islam then spread rapidly through the weakened Byzantine and Persian empires. Trade between China and Europe nearly stopped, and Plague almost disappeared by 750.
- 1347 CE During the 1200s, the Mongols from east Asia invaded Europe and Persia. This ended the Arab trade monopoly. Trade began on the old Silk Road again. Camel and horse caravans brought plague-carrying fleas from China to Central Asia by 1338. In 1345, Plague hit an army that was attacking Kaffa, a Black Sea port. Afraid of losing, the attackers used catapults to throw dead bodies across the city walls. To escape, people got on ships and went back to Europe, carrying the disease with them. By 1350, Plague had killed almost half the population of Europe.
- 1368 CE The Ming ended the weakened Mongol Empire in China. Trade almost stopped. Scattered outbreaks of plague did not spread far.
- 1492 CE "Columbus sailed the ocean blue." Native Americans had little resistance to European diseases. Millions died as diseases swept the continents.
- 1918 CE World War 1 brought soldiers from different parts of the world together in crowded camps. A bad strain of flu spread quickly around the world, and killed at least 50 million people.

Question: How are things different today? Could this kind of thing happen today?

# The GeoHistory of Religion

Religion has been a powerful force in human history. At different times and places, religion helped unify or divide large numbers of people. The history of religion is complicated, because different religions started in different parts of the world.

Here is some background information on several major religions (the early dates are approximate):

` ,	
1900 BCE	The Epic of Gilgamesh (G) was written in Mesopotamia.
1200 BCE	The sacred Vedas were written in India – beginning of Hinduism (H).
1200 BCE	Ten Commandments given to Moses near border of Africa and Eurasia; Judaism (J) spread after Jews were deported to Babylon in 586 BCE.
550 BCE	Lao Tzu, a teacher in China, became known as founder of Taoism (T).
500 BCE	Siddhartha Gautama, a teacher in India, became known as the Buddha: Buddhism (B) became the official religion of India in 256 BCE and spread to China about 100 CE, to Japan about 550 CE.
500 BCE	Confucius was a teacher in China; Confucianism (C) became the official religion of China in 136 BCE.
30 CE	Jesus Christ preached in Palestine; Christianity (X) spread northwest to Europe and south to the highlands of east Africa within 100 years
475 CE	Shinto (S) shrines were established in several parts of Japan.
622 CE	Muhammad went to Medina in Arabia in year 1 of the Islamic calendar; Islam (I) spread west across north Africa and east to the Indus Valley within 100 years; Spain, India, and Indonesia became Islamic later.
1517 CE	Martin Luther posted 95 theses in Germany, which was a key event in the Protestant Reformation (P) that split Christianity.
4	

- 1: Look at a map and find the part of the world where each event occurred.
- 2: Go to the GeoHistGram, and:
  - a. Put capital letter at the appropriate place and time to show where each new religion started; for example, put a "B" where Buddhism began.
  - b. Put a lower-case letter at the appropriate place and time to show where a particular religion spread away from its origin.
  - c. Optional: Look at your diagrams of empires and intercontinental bridges to see whether your religion spread with a particular empire or bridge.
- 3: Write a paragraph to describe the conditions when the religion was started. You might think of your paragraph as the first page of a novel which will tell a story about how people tried to cope with changes brought by the religion.

## The GeoHistory of Great Buildings

Monumental buildings are some of the longest-lasting products of great civilizations. For this reason, people often think of a building as a kind of icon - a kind of symbol that represents a given civilization. A building also reflects the environment in which it was built.

The first step in exploring the geography of great buildings is to identify where and when they were built. Here is background information on twenty important buildings (many dates are approximate, because most buildings took many years to construct):

Α	2550	BCE	Great pyramids along the Nile River in northeast Africa.
В	2000	BCE	Stonehenge in the British Isles of northwestern Europe.
С	470	BCE	Parthenon in Athens, Greece (southeastern Europe).
D	300	BCE	Great Library in Alexandria, Egypt (near the Nile).
Е	215	BCE	Great Wall (one of several) in northern China
F	80	CE	Colosseum in Rome, Italy (Europe)
G	120	CE	Hadrian's Wall, built by Romans in northern England
Н	450	CE	Mayan temples at Tikal, Yucatan Peninsula of southern Mexico
1	535	CE	Hagia Sophia in Constantinople (later renamed Istanbul)
J	585	CE	Horyuji Temple in Japan (east Asia)
K	750	CE	Borobudur Temple on the island of Java, Indonesian islands
L	1050	CE	Westminster Abbey in London, England (Europe)
M	1125	CE	Angkor Wat in Cambodia, east Asia
Ν	1163	CE	Notre Dame cathedral in Paris, France (Europe)
0	1200	CE	Great Zimbabwe in South Africa
Р	1406	CE	Forbidden City in Beijing, China
Q	1450	CE	Machu Picchu, city in the Andes Mountains of South America
R	1452	CE	Basilica of St. Peter, Vatican City (inside Rome)
S	1632	CE	Taj Mahal in northwestern part of South Asia
Т	1889	CE	Eiffel Tower in Paris, France (Europe)

- 1: For each building,
  - a. Put a small but prominent capital letter at the appropriate place and time on your GeoHistoGram to show where and when it was built.
  - b. Optional: Look at your timelines of empires, intercontinental bridges, religions, and other topics. Try to decide whether your building may have been associated with a particular empire, bridge, religion, etc.
- **2**: Write a paragraph to describe the conditions when the building was started. You might think of your paragraph as the first page of a novel or TV show which will tell a story about how the building affected the lives of people who lived near it.

#### Gather It Wild or Grow Your Own?

The real breakthrough we call agriculture is not just discovering how to put seeds into the ground - it is also knowing what kind of seed is likely to survive in your environment and provide useful food when it is fully grown.

Different parts of the world discovered different crop plants at different times. People who found good seeds often were healthier and stronger, and in many cases eventually conquered their less fortunate neighbors. To understand the world today, therefore, it helps to know where people "discovered" the idea of farming.

Here is a summary of some important archaeological evidence:

8000 BCE	Wheat in the Middle (Mesopotamia, now called Iraq)
6500 BCE	Rice in the Yangtze Valley (part of modern China)
6000 BCE	Cotton in the Indus Valley (part of what is now called Pakistan)
6000 BCE	Grain in the Nile Valley of Egypt (in northeastern Africa)
5000 BCE	Irrigating to increase yield in Mesopotamia and Egypt
4500 BCE	Grain in the Ganges Valley (northern part of modern India)
4000 BCE	Sorghum in what is now called Sudan in northeast Africa
4000 BCE	Grains in the British Isles, in northern Europe
3500 BCE	Grasses near the ocean in the country now called Peru
3000 BCE	Sorghum and millet in west Africa
2700 BCE	Maize (corn) in several parts of the country now called Mexico
2000 BCE	Root crops on the island that is now called New Guinea
1200 BCE	Maize in several parts of what is now the United States

Part 1: Draw a thick capital letter A (A) on your GeoHistoGram to indicate the time and place of each of those archaeological records about agriculture.

Part 2: Go to the world map, and:

- 1. put a easy-to-see capital letter A(A) at each place noted on the list above.
- 2. write the date and the crop (if known) next to that map symbol
- Part 3: Do some Internet research and write a paragraph to describe the changes that might have occurred when farming arrived in a particular part of the world. Remember that the technology of farming may have
  - been independently invented, by learning how to use a local plant for food,
  - spread from other areas, by seeing the value of farming and copying the idea,
  - spread violently, by conquering new territory.

At the end of your paragraph, you might make a connection to the present day. In many ways, the arrival of some new invention is like the arrival of agriculture in the past. For example, what happens when people can send fruit long distances on refrigerated trucks? What about inventing a cell phone?

# Geography of Important Inventions

People often invent things to solve problems or make their lives easier or more fun.

Some inventions were so important that they changed the way people live. An invention such as airconditioning, for example, can make hot places more comfortable. Other places may lose when people move their factories, offices, and houses to places they used to think were too hot. In short, any important invention can make some places more valuable and other places less so.

Here is some background information on 12 major inventions.

Approximate date	Place now called	Invention
4500 BCE 2500 BCE 1600 BCE 310 BCE	Iraq China Turkey Italy	plow pulled by animals, to prepare ground for planting pottery wheel, to make jars and bowls iron, by the Hittite people aqueduct to carry water across a valley
100 CE 600 CE 850 CE 1000 CE	India Iran China China	sailing ship that can use monsoon winds to cross ocean windmill to pump water gunpowder (made into explosive rockets in 1200 CE) spinning wheel to make thread
1300 CE 1733 CE 1807 CE 1975 CE	Peru England England America	cable bridges across rushing mountain streams flying shuttle loom to make cloth steam powered pump (or 1807, New York, steam boat) satellite TV and telephone connections

- ${f 1}$ : For each invention, look at a world map and find the place where the new idea was discovered. Put a prominent dot on that place, and write the date and a brief description of the invention.
- 2: Go to the GeoHistoGram, and:
  - a. put a capital letter at the appropriate place and time to show where a new idea was discovered; for example, put an "I" where iron was first used.
  - b. optional: look at your timeline of inter-regional bridges and decide whether your invention might have made use of a particular link between places
- $oldsymbol{3}$ : Write a paragraph to describe the conditions before the invention. You might think of your paragraph as the first page of a novel or TV show, which will go on to tell the story about how people tried to cope with the changes that occurred as a result of the invention.

Wooden Clubs and Iron Swords

To appreciate the value of iron, you might think about trying to chop down a tree with a rock. Or trying to cut a board with a sharpened bone. Or imagine that you have a wooden club, and someone attacks you with a sharp sword or a battle-axe.

In short, having iron is a big deal. It changed the way people did many things. Moreover, people who did not have iron usually lost if they got in a war with people who had iron tools and weapons. The arrival of iron-making technology in an area, therefore, usually marks a turning point in its history.

Here is a summary of the archaeological evidence about iron:

	,
1550 BCE	The Hittites develop iron technology in Anatolia (in the Middle).
1100 BCE	People use iron in the Ganges Valley of India (South Asia).
1000 BCE	People make iron tools and weapons in Greece (southeastern Europe).
750 BCE	Iron is used in the Nile Valley of Egypt (northeastern Africa).
700 BCE	Iron-making spreads throughout continental Europe.
600 BCE	Iron-making starts in west Africa, near what is now called Nigeria.
500 BCE	People make iron in Scandinavia (northwestern Europe).
400 BCE	People in south Africa have iron tools.
1400s CE	First metal-working in the Andes Mountains of South America.

- ${f 1}$ : Draw a thick capital letter I ( ${f I}$ ) at the appropriate time and place on your GeoHistoGram to indicate each of those archaeological records.
- 2: Go to the world map, and:
  - put capital letter I (I) at each place noted on the table above.
  - write the date next to that map symbol
  - 3. draw arrows to show the likely route of the spread of iron technology
- 3: Write a paragraph to describe the changes that might have occurred when iron arrived in a particular part of the world. Remember that the technology may have spread quietly (as "your people saw the value of iron and learned how to make it"). On the other hand, it may have spread violently, if people who had iron weapons came and conquered "your" territory. You might think of your paragraph as the first pages of a novel or TV show. This story might go on to tell about how some people tried to cope with changes that occurred because of the arrival of iron.

Somewhere in your paragraph, you might make a connection to the present day.

Here is one way to do that: suggest how some new invention today is like the arrival of iron in the past. For example, what happens when people in a particular place get cell phones or the Internet for the first time?

#### Revolutions and Rebellions on the GeoHistoGram

News flash: the American Declaration of Independence did not start the first revolution in history. Note these times and places on your GeoHistoGram (your teacher will say how many):

- A. c2700 BC Seth Peribsen fought rebels during his reign as Pharaoh in Egypt. Hieroglyphics on his tomb may be the first complete written sentence.
- **B**. c2380 Urukagina led revolt to depose corrupt King Lugulanda of Sumer. A cuneiform tablet has what may be the first written legal code.
- C. c615 BC: Nabopolassar led Babylonian revolt against the Assyrian Empire.
  This rebellion encouraged others in many different parts of the empire.
- **D**. 499 BC: Greek cities in Ionia (modern Turkey) revolted against Persian rulers. These former Greek colonies rebelled to rejoin their old Greek rulers.
- **E**. 206 BC: Liu Bang led a revolt against Qin in China and started the Han dynasty.
- F. 167 BC: Judah of Maccabi led a Jewish revolt against the Persian Empire.
- **G**. 73 BC: Spartacus led a slave rebellion against Roman rule. It eventually failed.
- **H**. 40: The Trung Sisters led a Vietnamese uprising against Chinese domination.
- I. 60: Queen Boudica led a Celtic revolt against Roman occupied Britain.
- J. c500: King Gudfred built the Danevirke wall to protect Danes against Saxons. This helped the Vikings create an independent country on the peninsula.
- **K**. 541: Lý Nam Đế led a Vietnamese uprising against Chinese domination.
- L. 713: Mai Thúc Loan led a Vietnamese uprising against Chinese domination.
- M. 740: Maysara al-Matghari led the Great Berber Revolt in northwest Africa. This was the first successful secession from the Islamic caliphate.
- **N**. 747: The Abbasid Revolution overthrows the Umayyad Islamic caliphate.
- O. 755: General An Lushan led a rebellion against the T'ang dynasty in China. More than 30 million die in the second bloodiest revolution in history.
- **P**. 791: Phùng Hưng led a Vietnamese uprising against Chinese domination.
- **Q**. 821: Thomas the Slav led a rebellion against the Byzantine Empire.
- **R**. 869: Alī bin Muhammad led Zani revolt of African slaves against the caliphate.
- **S.** 1034: Vojislav of Duklja led two Serbian revolts against the Byzantine Empire.
- T. 1296: William Wallace and others started rebellion that became known as the First Wars of Scottish Independence.
- **U**. 1418: Lê Lơi led a Vietnamese uprising against Chinese occupation.
- f V. 1644: General Li Zicheng led a rebellion against the Ming dynasty.
- **W**. 1672: Khushal Khan Khattak of Kabul led Afghan revolt against Mughal Empire.
- X. 1776: British colonists in North America declare independence from England.
- Y. 1789: former slaves in Haiti start an anti-slavery and anti-colonial revolution.
- **Z**. 1791: Revolutionaries overthrow the Bourbon monarchy in France.

Then look at the GeoHistoGram carefully. Note what happened just before, just after, and around this revolution. Ask yourself three questions:

Did the revolution <u>end</u> a dynasty or kingdom? Did it <u>start</u> one? What else was happening about the same time in other parts of the world?

#### Climate on the GeoHistoGram

Weather happens day to day - Climate is the average over a long period of time. "You dress for the weather - you buy clothes for the climate."

Climate changes, for a variety of reasons - changes in earth orbit or solar intensity, eruptions by volcanoes, and human activity, starting with the discovery that fire could be "harnessed" to change ecosystems and make hunting better.

Fossils and tree-rings suggest that the earth has had several distinct periods of time when temperatures were generally warmer or cooler than the long-term average. Use color or thin lines to mark these times on your GeoHistoGram:

7000-6000 BCE	Temperatures generally level after centuries of increase after the glaciers melted. Human populations grow; agriculture starts in several places around the world.
6000-4500 BCE	Post-glacial Warm Era – several degrees warmer; humans spread northward in Eurasia and America.
3900-3200 BCE	Cooler and rainier climate – several valley civilizations begin.
2800-2200 BCE	Indus Warm Time – monsoons are stronger in South Asia.
1500-1300 BCE	Hittite Cool Time – after several centuries of gradual cooling
1200-900 BCE	Warm time puts more water in rivers that get rain from the Equatorial Rainy Zone – e.g. Nile, Niger, Indus, Yangtze.
500-200 BCE	Greek Minimum – cool time makes more rain in dry-summer Mediterranean climates (about 35 degrees N&S).
100 BCE-300CE	Roman Optimum – warm weather encourages empires to expand north, e.g. in Europe (Roman) and China (Han).
400-800 CE	Dark Ages – generally cooler climate encourages nomads to migrate south in Europe, Asia, and North America.
950-1250 CE	Medieval Warm Period – peaking between 1050 and 1150, this is warmer than "normal" (as its name implies).
1350-1850 CE	Little Ice Age – time of relative cool, with especially cold weather between 1450-1500 and 1640-1700.
1880-now	Modern time – average temperatures rise, with considerable year-to-year variation (a fact that is easier to show now, because people have accurate thermometers).
_	

- 1: Examine your modified GeoHistoGram and make 3-5 statements about how climate could have influenced history (for example, cool weather about 400 CE might have encouraged "barbarians" from central Europe to attack Rome).
- 2: Looking at the influence of climate in history, we should try to avoid falling into a trap called *determinism* thinking that climate <u>determines</u> history.
- Rank your statements according to your confidence. Put the generalization that you think is most likely to be true at the top of your list. Mark those that you think might be more questionable. Be prepared to discuss your ranking.

#### Famine, Disease, and War on the GeoHistoGram

Death by starvation has been an unfortunate fact of life throughout human history. Before the invention of cans and freezers, it was hard to store enough food to last through a bad year. Before refrigerated trucks and railcars, it was hard to send food to places where crops were damaged by drought, frost, hail, floods, or insects.

Climate changes, famines, and history are linked in complex ways. Here are five:

- 1. A long period of good weather and plenty of food can make people healthier. They have more children, get stronger, and can attack weaker neighbors.
- Drought, frost, hail, or insects can damage crops and cause starvation.Malnutrition makes people weaker, vulnerable to disease or enemy attack.
- 3. Cold or dry conditions can persuade people to move somewhere else.
- 4. If people get desperate, they might steal food, riot against government, raid their neighbors, or start wars, making things even worse.
- 5. Loss of faith in government can result in breakdown of irrigation, storage, and transportation systems, which in turn can lead to more starvation.

Here are some important weather events that had economic and political effects:

2500 BCE	Drying conditions require irrigation in Indus Valley.			
2200 BCE	Egypt had decades of low floods, dry crops, and starvation.			
2150 BCE	Drought and famine hit Sumeria; nomads invade and conquer.			
1500 BCE	Continued drying causes salt to accumulate in Indus Valley soils.			
100 BCE	North Africa continues to get drier, and food surplus disappears.			
11 CE	Shift in position of Yellow River causes great famine in China.			
400 CE	Famine hits many parts of Europe as trade networks break down.			
639 CE	Famine throughout Arabian peninsula and southern Mesopotamia.			
875 CE	Peasant rebellion in China after years of bad crops and famine.			
1022 CE	First of three big famines in India, entire provinces depopulated.			
1229 CE	Famine in Japan caused by earthquakes and volcanic eruptions.			
1315 CE	Widespread famine in Europe; 1346 Plague sweeps across Europe.			
1620 CE	Coldest 20 years since 1000 in China; floods and famine follow.			
1770, 83 CE Famines in India kill 21 million. 1815 Volcano in Indonesia				
1820s	Famines in China kill 45 million. 1849 Potato famine in Ireland			
And so forth				

- Part 1: Draw a symbol (e.g. a thick capital letter **F** on your GeoHistoGram to indicate the time and place of each archaeological or historical records about famine.
- Part 2: Study your GeoHistoGram and write a paragraph about other historic events that might have been either causes or consequences of times of food shortage and starvation. Remember: famine, disease, rebellion, and war often go together.

#### **Turning Points in History**

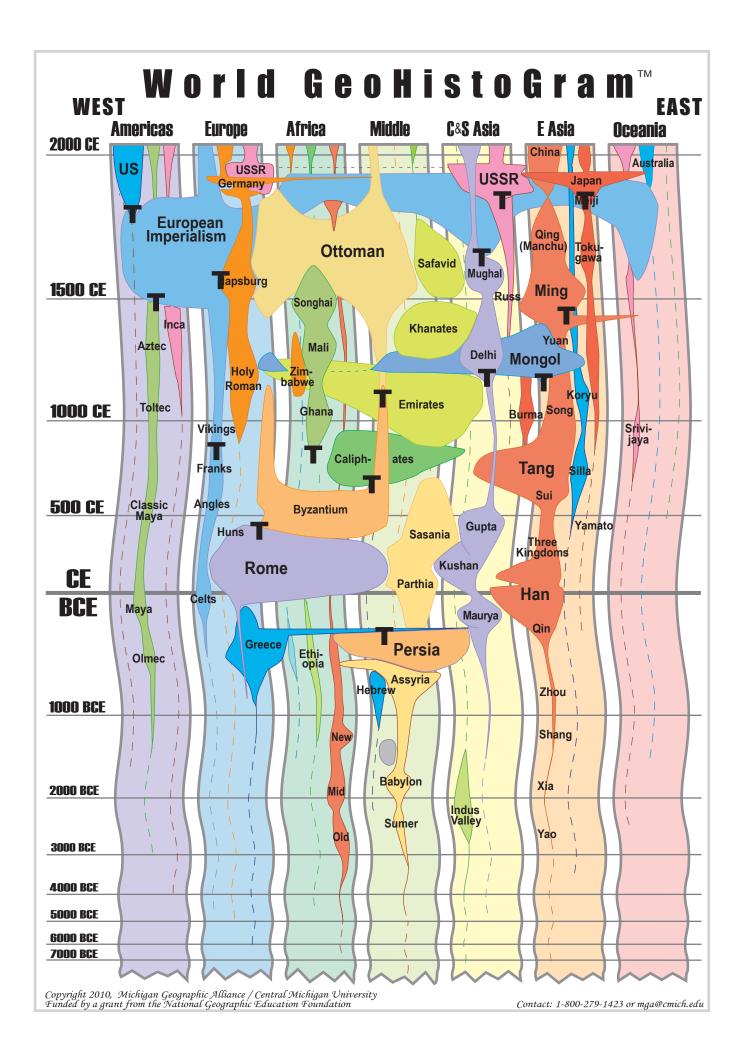
In 1683, the Ottoman army tried to take Vienna, a city-fort that was located in a narrow gap where the Danube River (the largest river in Europe) goes between the Alps and the Carpathian Mountains. For several centuries, the Ottoman Empire had been expanding, capturing more and more land in Europe. Armies from Poland and France came to help defend Vienna. After they defeated the Ottoman army, they began pushing the other Ottoman forces back out of Europe.

Historians call the failed Siege of Vienna a major turning point in history.

Here is a list of 15 events that some people have called turning points in history. Study the GeoHistoGram that has T symbols drawn on it to mark turning points. Write the approximate date and general location on the lines after each event.

Event	Date	General Location
A. Alexander's Greek army defeats Persian army		
B. British East India Company ends Mughal rule		
C. Communist Revolutionaries kill Russian Czar		
D. Crusaders capture Holy City of Jerusalem		
E. Ghana empire begins to trade across Sahara		
F. Islamic invaders start Delhi sultanate in India		
G. Meiji Restoration begins Japanese expansion		
H. Ming dynasty turns inward, stops exploration		
I. Mongols start to build world's largest empire		
J. Muhammad's army captures Mecca in Arabia		
K. Protestant Reformation against Catholic Church		
L. Spanish Armada fails to destroy British fleet		
M. Spanish army under Cortez defeats Aztecs		
N. 13 British colonies declare independence		
O. Vikings attack monastery in British islands		

**Poster or essay**. Choose one of these turning points. Do some research. Then write a paragraph (or design a poster) to describe what life was like in the place where the turning point occurred. Think about how people might have tried to cope with the changes that occurred around the time of the turning point.



Many times in history, one group of people tried to eliminate another group by killing everybody - men, women, and children. These attempts to "utterly destroy" an entire population are called **genocides**. Unfortunately, history is often written by the winners, and many facts about genocide may be misreported or even "forgotten."

#### Note these times and places on your GeoHistoGram:

- ~1100 BCE The Bible describes how one people took some land near the east end of the Mediterranean Sea: "We utterly destroyed the kingdom of Bashan just as we had destroyed King Sihon's kingdom, killing the entire population—men, women, and children alike." (Deuteronomy 3:6)
- 140s BCE Roman armies completely destroyed Carthage in North Africa: a Yale historian called this historic event "the first genocide."
- 800s CE The Anasazi people of southwestern North America "disappeared;" the authors of a detailed 2010 study called this a genocide.
- 1200s CE Mongol people from east Asia invaded central Asia and killed everyone in several places where local people tried to resist the invasion.
- After 1492 CE More than 90 percent of the people in North and South America died of disease, were killed, or were "removed" from their land.
- 1750s CE armies of the Qing Dynasty of China ("helped" by disease and famine) killed more than two thirds of the Dzungar people of central Asia.
- 1830s CE The Maori people invaded a large group islands near Australia and killed or enslaved nearly all of the Moriori people who lived there.
- 1890s CE By ordering torture and killing for many years, King Leopold of Belgium is described by historians as responsible for the deaths of at least 10 million people in the Congo near the equator in central Africa.
- 1910s CE Around World War I, Turkish people started a program of killing Armenian people in the area just north of modern-day Iraq and Syria.
- 1940s CE Around World War II, German people carried out Adolf Hitler's "final solution to the Jewish question" – by 1945, the Nazis had killed more than 6 million Jews, in concentration camps such as Auschwitz.
- 1970s CE The Khmer Rouge (Pol Pot regime) killed hundreds of thousands of Buddhist, Chinese, and Muslim people in East Asian Cambodia.
- 1990s CE People called the Hutu killed least 500,000 Tutsi people in Rwanda. a small country in central Africa.

#### Discussion questions.

Would you call each of these "genocide?" Which ones (if any) might not be? Do you think this kind of thing is happening today? Where? Who is involved? How are things different today?

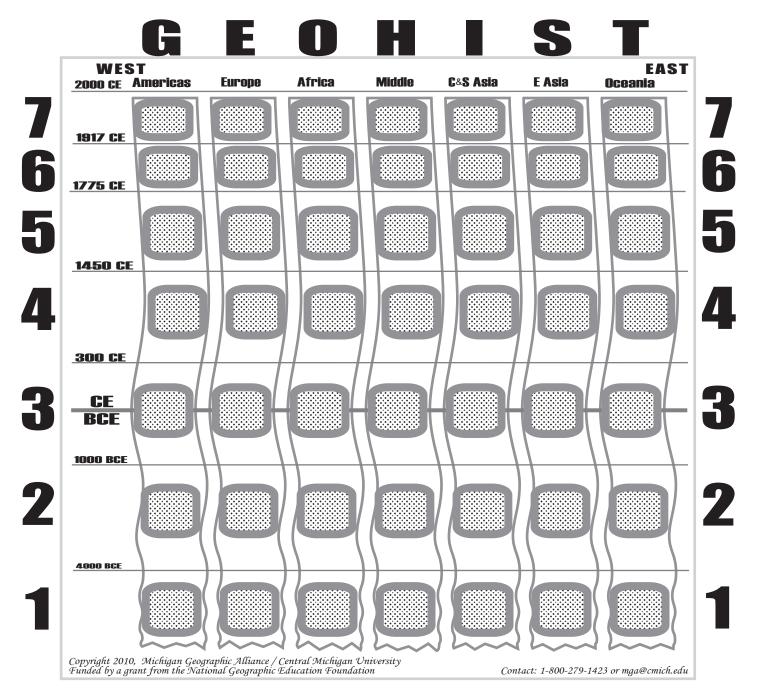
USING A GEOHISTOGRAM TO HELP ANSWER DOCUMENT-BASED QUESTIONS

- 1. Introduction. Try to restate the question in the form of a simple sentence that introduces the idea of historical and geographic context. For example, suppose the question asks you to interpret several documents about the Mali Empire and the city of Timbuktu in West Africa. You could start your answer by saying "The Mali Empire was one of several important trading empires in the centuries before Columbus crossed the Atlantic Ocean. Mali's importance depended on its location in West Africa . . . . "
- 2. Setting. Mentally picture the position of the place on a GeoHistoGram. Decide if you want to focus on time or place first. Go to either step 3S or 3T first, then the other one.
- **3S**. **Space** (Geography). Write a sentence (or a short paragraph) that describes something that was happening somewhere else in the world at roughly the same time. For example, "The Mali Empire expanded in West Africa about the same time as the Byzantine Empire was losing influence in the area around the Mediterranean Sea." Or, "On the other side of the world, the powerful Tang Dynasty in China had just ended. That left a kind of power vacuum that allowed the Mongols, under Genghis Khan, to expand. These changes, in turn, had effects that reached all the way to Africa . . . . " Your goal in this part is to provide evidence that you can list *some* things that were happening about the same time. You do not have to mention these specific items; just mention the items you find in the documents (The purpose of the GeoHistoGram, after all, is to help you organize facts; then you can think about how they might be related.)
- **3T**. **Time** (History). Write a sentence (or a short paragraph) that describes something that happened in the same general part of the world either before or after the event in the question. For example, "The Mali Empire followed the Ghana Empire that helped build the trading networks in West Africa. Some of these traders carried gold from the mountains of southwest Africa across the dry Sahara to the Mediterranean Sea." Or, "The Mali Empire arose in west Africa a few centuries after Islam started to spread from Arabia across North Africa." Your goal in this part is to provide evidence that you can list some things that happened before or after the event in the question.
- **4**. **Influence**. Write a short paragraph to describe at least one way in which the event in the question might have influenced (or was influenced by) the events you mentioned in Part 3S and 3T. You should choose an influence that you can see in the documents provided as part of the question. For example, if one of the documents is about the rise of Islamic science, you could write something like "The city of Timbuktu was part of the general rise of science in the Arabic world of North Africa and Southwest Asia. The document describes a university at Timbuktu – it had a good location because of the importance of Timbuktu in the trading networks of the area at that time."

**Important point**: the documents provided in the guestion will contain the facts that you should mention. Your job is to find those facts and then to write some sentences that link them to the general space and time context that you outlined in Part 3. Your score on the question will depend on what facts you find and how well you make connections. The GeoHistoGram can help by giving you a few relationships that can get you started. It can also give you a framework for organizing ideas.

# GeoHistoGram Bingo

- 1. The reader will read the name of a major person or event in history.
- 2. Place a marker in the space-time box (the world region and specific era) where and when you think that event occurred.
- 3. The reader will read the corrent space-time location for the event.
- 4. If you picked the correct box, you may leave that marker in its box and add another marker to any other box you choose.
- 5. If you picked a box that is "off" by just one letter or number (C3 or D4 instead of C4), you may move the marker to the correct box and leave it there.
- 6. If you picked a box that is "off" by more than one letter or number, you must remove that marker and another one you already had on the board.
- 7. The first person to get five markers in a row (horizontal, vertical, or diagonal) is the winner and becomes the next reader.



# GeoHistoGram Bingo

Cut these apart, add some of your own, mix in a box or bowl, and draw for game.

Neanderthal cave painting <b>E 1</b>	Mauryan Empire <b>I3</b>	Invention of gunpowder \$4	Muhammad's journey <b>H4</b>	Ming Dynasty <b>S5</b>
Olmec civilization <b>G3</b>	Otto von Bismarck <b>E6</b>	Code of Hammurabi <b>H2</b>	Olduvai Gorge <b>O 1</b>	Ghana Empire <b>O4</b>
Crusades <b>E4+H4</b> (must have both)	Columbus E5+G5 (must have both)	Attila the Hun  I4+E4 (must have both)	Silk Road  I3+S3 (must have both)	Hebrew Exodus  O2+H2 (must have both)
Stonehenge <b>E2</b>	Confucius <b>S3</b>	Peking Man <b>S 1</b>	French Revolution <b>E6</b>	Srivijaya Empire <b>T4</b>
Ptolemy <b>O3</b>	Pyramids <b>O2</b>	Gupta Empire <b>I4</b>	Clovis Points <b>G1</b>	Indus Civilization <b>I2</b>
Charlemagne <b>E4</b>	Protestant Reformation <b>E5</b>	Hydrogen Bomb <b>T7</b>	Meiji Restoration <b>S6</b>	Suleiman the Magnificent <b>H5</b>
Mohandas Gandhi <b>I7</b>	Whydah Slave Port <b>O5</b>	Domestication of Wheat <b>H 1</b>	Inca Empire <b>G4</b>	Hadrian's Wall <b>E3</b>
Burma Road <b>S7</b>	Mustafa Kemal Ataturk <b>H7</b>	Akbar the Great <b>I5</b>	Crimean War <b>I6</b> or <b>H6</b>	King David <b>H3</b>

GeoHistoGram - Frequently Asked Questions

By late 2012, more than 45,000 copies of the first two editions of the GeoHistoGram had been distributed, in more than ten states. During that time, many people made useful comments and suggestions. Many of their suggestions have been incorporated into the third and fourth editions of the GHG. Other questions, however, have more complicated answers.

- 1. What criteria did you use to decide which empires to include? We consulted a number of historical atlases and timelines, but the major criterion was the frequency of inclusion in state and district standards and assessments.
- 2. Why aren't the millennium-lines spaced evenly? Two reasons: First, fewer people were alive five thousand years ago, and therefore there was "less history." Second, the "mental timeline" in the human brain appears to have a logarithmic spacing – for most people, there is more "psychological distance" between last Tuesday and Wednesday than, for example, July 10 and 11, 1994.
- 3. Why did you pick rainbow colors for the background? They are familiar to most students, the "ROY G BIV" list has seven colors, and some studies suggest that seven is the maximum capacity of human short-term memory. The real answer, however, is that it does not matter - if you prefer rectangular boxes and the colors of minestrone soup or the Albanian or Zimbabwean flag, go ahead and use them - just keep a consistent base where students can keep adding information.
- 4. Can we change the list of religions to match our local curriculum? Yes - feel free to change any of them to match local assessment standards.
- 5. Can we add another layer of information to the map? Yes - in fact, you probably should add some layers, in order to meet the assessment standards in your state or district. That's one big advantage of the GeoHistoGram.
- 6. Wasn't the Han empire as big as the Roman empire? Why can't we just measure the height and width of two empires to compare their importance? This is an old question in geography – just as it is not possible for a flat world map to show the area of every country accurately without distorting distances and/or directions (and vice versa), the GeoHistoGram cannot show precise size without distorting spatial or temporal relationships (and vice versa). We used frequency of mention in state standards to help decide where to put the inevitable distortion. For example, Siberia and northern Canada do not even appear on the diagram, when in fact they are huge areas, many, many times as large as Greece.
- 7. A student asked me if Afghanistan is in the Middle or in Central Asia. Which is it? If a student asks that, congratulate the student for already having a good mental map! Then note that in fact Afghanistan has been a transition through most of its history.
- 8. Why are Great Zimbabwe and Ghana both shown in the middle of Africa? See answer to guestion 6. Actually, when students' mental maps get sophisticated enough that they notice this kind of detail, it is another good time to celebrate, no?
- 8. Can we zoom in on specific regions or eras? In theory, yes, BUT.... One huge advantage of the GeoHistoGram is that it is a consistent framework, and students "naturally" encode the location of events on the page (e.g., they remember Maurya below the zero line and right of the middle). If we zoom in, we keep rearranging the framework, and students have to encode different positions for the same event. As a result, the memory advantage of consistency is lost.