Historical Change

Essential Questions

1. How does the physical and human geography of the world change over time?
2. What are the main causes of historical change?

Important Vocabulary

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How Geography Changes over Time

How did the world come to be as it is today, and how will it be tomorrow?

The geography of the world is a process of constant change.

I. Changes in Physical Geography
   a. Tectonic plate movement and erosion gradually change the shape of the earth’s surface
      i. These cause physical change
      ii. Some of these changes can take thousands of years
b. The Sahara Desert
   i. Scientists believe it was once a fertile and flourishing land, covered in forests and flowing rivers
   ii. As earth’s climate grew warmer, the Sahara grew drier
   iii. Over a span of thousands of years, it became a desert
c. The Siberian-Alaskan Land Bridge
   i. A land bridge once connected Siberia and Alaska during the last Ice Age, about 11,500 years ago
   ii. Both were part of the same physical regions
   iii. When the earth became warmer, glaciers melted causing sea levels to rise and bury the land bridge
   iv. They became separated by the sea and were no longer connected
II. Changes in Human Geography
   a. Human geography changes more quickly than physical geography
      i. A cultural region or political unit can expand, contract, or even disappear over time.
         1. The Americas
            a. Once consisted of many Native American Indian cultural groups
            b. These groups divided both North and South America into different cultural regions
               i. Inca Empire
               ii. Aztec Empire
               iii. The Sioux of the Great Plains
            c. Arrival of the Europeans greatly disrupted these tribes
            d. The Americas changed into new cultural regions based on European exploration, colonization, and settlement
2. The Roman Empire
   a. The ancient Roman Empire formed a vast cultural region
   b. It changed over time and eventually disappeared
   c. Began as a small city-state near the west coast of central Italy
   d. The conquering of the surrounding nations allowed Rome to control almost every aspect of life
      i. System of government
      ii. Foods
      iii. Religion
      iv. Culture
      v. Slave labor
   e. After several centuries, Rome began to shrink under the invasions from hostile barbarian tribes
   f. Eventually, the region divided into two separate empires, then finally collapsed
3. Traditional Societies
   a. Resist change
   b. Prefer to do things much as their ancestors have done
      i. Amish in the United States
      ii. Bedouin Tribes of North Africa
iii. The Maori of New Zealand

iv. The Aborigines of Australia

III. The Roots of Change

a. What factors cause human cultures and regions to change? (Migration, Cultural Diffusion, Trade, Conflict/War, Technological Innovation)

i. Migration

1. The movement of people from one place to another
2. When new people arrive, they often bring new beliefs, technologies and ways of doing things
3. Their arrival also may lead to conflict or conquest
   a. Example: In ancient times, Aryan tribes entered India and transformed Indian society by introducing Hinduism and the caste system.
      i. In the 900s, the invading Muslim people brought the Islamic religion through the 33 mile wide Khyber Pass to India
ii. As a result, parts of India were once again totally transformed
   1. They came under Muslim rule and adopted Islam
   2. Many books in Sanskrit were translated into Arabic

b. Example 2: European immigrants in the 19th century brought new ideas, foods, customs and traditions to Texas and the rest of the United States
ii. Cultural diffusion

1. The spread of ideas, goods, technologies, and cultural traits from one society to another
2. Often a major cause of change
3. Chinese ideas greatly transformed Japanese society
4. Europeans and Native American contact greatly influenced one another
5. **Arab Spring (Arab Awakening)**
   a. Cultural diffusion from Western societies has led to political changes in North Africa and the Middle East
   b. A popular protest in Tunisia led to further public demonstrations in Egypt, Algeria, Jordan, Yemen, Syria, and Libya
   c. Existing dictatorial governments were overthrown
iii. Trade

1. The exchange of goods and services
2. Can occur within a country or between people from different countries
3. Encourages the spread of people, ideas, goods, and technology
4. Example: the Greeks and Romans enjoyed extensive trade across the Mediterranean Sea
   a. Generally easy in those days to carry goods by ship rather than over land
   b. Because of trade, Romans obtained:
      i. Cheap grain from North Africa
      ii. Silk from China
      iii. Olives from Greece
   c. Such trade promoted change
iv. Conflict/War
1. Armed conflicts occur either within a society or between different societies
2. Civil Wars and Genocide
   a. Different groups within the same society may compete for scarce resources or political power
   b. Different ethnic or religious groups in the same society may also fight with one another
      i. One ethnic group may want to eliminate the other
      ii. Believers of one religion may want to convert, remove or even exterminate those holding different religious beliefs
   c. Genocide
      i. If a dominant group tries to completely eliminate a religious or ethnic group, this is known as genocide—or the mass murder of a people
         1. Rwandan Genocide
            a. As many as a million Tutsi were killed in the genocide carried out against them in Rwanda

2. WWII Holocaust
   a. Nazi German leaders tried to murder all of the Jews in existence
   b. Six million Jews and minorities were sent to concentration camps, brutally tortured and eventually murdered
3. Khmer Rouge
   a. Communist Party in Cambodia in 1968
   b. Led by Pol Pot
   c. Responsible for the death of thousands of innocent Cambodians
3. **International Conflicts**
   a. Countries sometimes enter into armed conflict with one another
   b. They may disagree over their borders or have other disputes
   c. Leaders of one country may simply feel they can defeat and conquer another country
   d. They might go to war to take away some land or resources
      i. **Sepoy Mutiny**
         1. British Troops put down rebels in India during the Sepoy Mutiny of 1857
         2. One of the most well known uprisings during the British colonization of India

   ii. **Zulu British Wars**
       1. British soldiers also fought against the Zulus in South Africa and local tribes of Sudan
iii. **Opium Wars**
   1. In the 1850s
   2. British fought against the Imperial government of China in the Opium wars to obtain exclusive trading rights

iv. **Mexican Cession**
   1. The United States invaded Mexico to resolve a border dispute over Texas
   2. It used this victory to seize the Mexican Cession-lands that included present day California, New Mexico and Arizona
v. **Spanish-American War**
   1. The United States went to war with Spain in 1898 over issues that arose in Cuba

![Image of Dewey Smashes Spain's Fleet](image1)

vi. **WWII**
   1. In the 1930s, Nazi Germany and Imperial Japan sought to expand
   2. They went to war against their neighbors in order to conquer them
   3. Britain and France entered the war in order to stop German and Japanese expansion

![Image of WWII soldiers](image2)

![Image of WWII bombing](image3)
4. Conflicts over ideals
   a. Sometimes countries fight over ideas
      i. 16th Century: Catholic and Protestant rulers fought against each other in wars of religion
      ii. 18th Century: countries fought against each other over the French Revolution
      iii. Cold War: after WWII, Democratic and Communist countries were suspicious of each other
         1. The competed throughout the world to spread their ideologies (belief systems)
         2. In some nations, such as Korea and Vietnam, the Cold War actually erupted into fighting
         3. Threat of nuclear power was used amongst the super powers

5. Terrorism
   a. Sometimes a group does not feel strong enough to challenge a government openly
      i. Instead, it’s members commit cowardly acts of violence like suicide bombing in order to:
         1. Attract attention
         2. Create a sense of terror amongst the citizens of its enemy

6. The Impact of Conflict
   a. Conflicts can lead to cultural change
      i. Crusades
         1. For hundreds of years Christians traveled to Jerusalem to visit where Jesus was born
         2. When Muslims gained control over Jerusalem, the Pope called on Christians (11th-13th centuries) to retake the Holy Land
         3. In the ensuing Crusades, thousands of Europeans were exposed to Muslim technological achievements
            a. The use of 0 in mathematics
         4. The interaction stimulated demand for Muslim and Asian goods in Europe (silks, rice, spices, coffee, glass mirrors)
v. Technological Innovation
   1. Technology is the use of materials, tools, and skills to meet human needs
   2. Technological innovations is the development of new technologies
   3. Technological innovations often lead to important cultural changes
      a. Ancient Hittites around 2200 B.C. developed a process that allowed them to produce iron tools, weapons and ornamental objects
         i. There were able to conquer Egypt with their technologies
b. Johann Gutenburg
   i. Invented movable type in 1450
   ii. This allowed books and pamphlets to be mass printed quickly
   iii. The printing press helped to launch the Protestant Reformation by spreading criticism of the Catholic Church

4. Changes in transportation and energy
   a. Technological innovations in transportation and energy have led to significant changes of the physical environment
      i. Most of history, people have relied on their own legs, sailboats, or animal power to go from place to place
   b. Some rulers over the centuries have built paved roads and set up posts with fresh horses, in order to speed communications and movement of armies
      i. Others have dug canals to connect natural waterways
c. Steam Engine
   i. 1700s met dramatic change with this invention
   ii. Provided a new source of power that could be used in factories
   iii. Also provided power for transportation
d. Automobiles and Airplanes
   i. End of the 19th century, invention of the internal combustion engine
   ii. Used to power the automobile, and soon after the airplane
   iii. Each improvement in transportation increased the range of places people could travel to, or from which people could ship goods easily

5. Effects of Changes in Transportation
   a. Steam boat made it possible for European explorers to move upstream deep into the interior sections of Africa
      i. Established colonies
      ii. Slavery
   b. Railroad made it possible for Americans to travel and settle in the West
   c. The demand for energy has led people to dig mines for coal and drill holes for oil and natural gas
      i. The burning of these fossil fuels by factories, homes, cars and trucks has released large amounts of pollution into the atmosphere
Other Recent Technological Advancements

The pace of technological change is more rapid now than at any other point in history.

1. New information technologies
   a. Based on the computers and Internet
   b. Connects millions of computers together and makes vast amounts of information easily available
   c. Easy to tap into a vast storehouse of information

2. Global Positioning Systems (GPS)
   a. Satellites, powered by solar energy, circle the Earth in outer space
   b. The satellites send signals to the earth that are used by GPS devices
   c. Users can locate their exact position on Earth at any time
   d. Originally developed for military use, these devices can also be used to search for and rescue airplanes, to guide hi-tech weapons, and to eavesdrop on potential enemies

3. Geographic Information Systems (GIS)
   a. Computers make GIS possible
   b. In GIS, map-making and data-based technology are merged
      i. Computers capture, store, manage, and analyze information and store this digital information at each location on a map.
      ii. With GIS, we better understand, interpret, and visualize data in a variety of ways to show relationships, patterns, and trends in the form of maps, reports and charts
4. **Air Conditioning**
   a. Allows people to move to places where could not previously live comfortably
   b. In the U.S. population was once concentrated in the Northeast
      i. Since the 1960s, the South and West have increased in population four times as much as the Northeast

5. **Desalinization**
   a. In many places of the world, there is a lack of fresh drinking water.
   b. Desalinization is the process of heating and cooling salt water in order to separate the salt and make fresh water
      i. One of the largest desalinization plants in the world is in El Paso, Texas
   c. Like air conditioning, this technological advancement will allow people to adapt to new environments

**DESALINATION IN TEXAS**

With 44 public water supply desalination plants currently operating throughout the state, Texas has an estimated total municipal desalination capacity of about 120 million gallons per day. The plants deal exclusively with brackish water sources, both above and below ground.

El Paso's Kay Bailey Hutchison desalination plant is the largest inland municipal desalination plant in the world.

Texas does not have a seawater desalination plant, but voters in South Texas have approved a plan to build one on South Padre Island. Construction is scheduled to begin in 2013.

Source: Texas Water Development Board
6. **Agriculture**
   a. The introduction of the tractor in the early 20th century transformed agriculture
   b. Today, scientists have developed better seeds, improved fertilizers, and stronger pesticides to kill harmful insects
      i. Farmers grow more plants with less water, land and labor
   c. Computers help plan, harvest and sell crops more efficiently
   d. Satellites help farmers obtain more accurate reports of weather conditions
   e. Due to these advancements, American agriculture has doubled in the past fifty years

7. **Trade**
   a. Technological innovations have also led to changes in trading patterns
   b. In ancient times, people mainly traded with nearby communities
   c. Later, ships grew larger and international trade increased
   d. The development of modern, large cargo and container ships, combined with the use of trucks and freight trains, has made global trade possible to an extent that would have seemed unimaginable even 50 years ago
8. Medicine
   a. Many technological innovations are leading to improvements in medicine
   b. Scientists now understand DNA, the genetic basis for human life
   c. They are able to design and test new medicines to fight specific diseases
   d. They also have new tools like CAT-scans (Computerized Axial Tomography), and MRI (Magnetic Resonance Imaging)

Notes created by Audrey Alamo, PreAP World Geography based on excerpts from “Mastering the TEKS in World Geography,” Jarrett Publishing.