

Age of Exploration

Film Clips: *Black Robe* (ambush and clock)

Art Work: Native Americans, Explores

TIME LINE:

Native American Cultures

5,500 - Agriculture in New World

Corn cobs about 25,000 years ago

1200-400 - Olmecs – first great civilization in New World

Mother Culture /village life/ Priestly elite/ public ceremonies/ Caste

850 – 250 Chavin civilization

200 – 700 Moche civilization

500 – 1000 Huari civilization

500 – 1000 Tiahianaco civilization

800 – 1456 Chimu civilization

1000 Vikings re-discover Vineland

1099 First Crusade

1290's Marco Polo (came back with stories of the riches of China)

1415 Prince Henry – “Navigator”

First National Exploration from Europe

Removed Mediterranean Sea from center of trade

Control of trade with India

Barca could only sail 67 degrees into wind and 5 tacks

Caravel could sail 55 degrees into wind and 3 tacks / 1/3 faster

1441 Portugal enter slave trade

1442 China ended exploration and turned inward

1474 Isabel and Ferdinand united

1488 Bartholomew Dias reached Cape of Good Hope

1492 Re-discovery

Columbus Discovers Caribbean Islands

Columbus set in motion:

Use of Caravel and Compass, Astrolabe and use of currents

Set Europe on conquest

Spanish Expel the Moors from Granada

Inquisition starts in Spain

Jews expelled from Spain

New - Old World Impact:

Double worlds food supply

Set in motion population explosion

Set in motion demand for inventions

Exchange of environments

- 1494 **Treaty of Tordesillas**
Line of Demarcation Pope divided world between Portugal and Spain
- 1497 **Amerigo Vespucci – Martin Waldseemuller**
- 1498 **Vasco da Gama reaches India**
170 men – 55 returned – scurvy (Lack of Vitamin “C”)
John Cabot
- 1513 **Balboa discovers the Pacific Ocean**
Portuguese reach China
Machiavelli *The Prince*
“Might Makes Right”
Spanish invade the North/South America
Three waves:
1st Columbus to Balboa
2nd Cortes in Mexico
3rd Pizarro in South America
Governments set up with Viceroy (Imperial), Military and Church
- 1517 **Oct. 31. Martin Luther posted 95 theses on the door of Wittenberg church**
- 1519-22 **Magellan - Elcano trip**
- 1521 **Cortes Capture Mexico City – Aztec**
St. Augustine settled
- 1530 **Calvin calls for religious reform -Predestination - The elect**
- 1531 **Pizzaro conquerors Incas - Cuzco**
- 1534 **Henry VIII - Church of England**
Puritans (fix church) Separatist (leave church)
Jacques Cartier - St. Lawrence river
Quebec settled
- 1539 **De Soto in Florida**
- 1540 **Coronado and Estevanico - Southwest**

Age of Reason

- 1543 **Copernicus – in Poland**
- 1558 **Elizabeth I becomes queen of England**
- 1565 **St. Augustine settle**
- 1577 **Francis Drake -**
- 1584 **Roanoke Island**
- 1588 **Spanish Armada defeated by English**
- 1607 **English Begin settlement at Jamestown**
- 1608 **French settle in Quebec**
- 1609 **Hudson - Dutch**
Santa Fe – established
- 1613 **New Amsterdam settled**
- 1620 ***Mayflower***
- 1632 **Galileo – Italy**

- 1642-53 English Civil War - Olive Cromwell**
 - Cavaliers and Roundheads**
 - Charles I John Locke**
 - Parliament win control**
- 1659 End of Habsburg bid for power of Europe**
 - Fall of Spain as first Nation-State**
- 1688 Glorious Revolution**
 - William of Orange and Mary**
- 1689 English Bill of Rights**
- 1763 England defeats France for control of North America – need to modernize**

Outline:

- I. Pre-Columbus**
 - A. The people of America before Columbus in America:**
 - B. Vikings**
 - C. Columbus advantage - Compass –astrolabe – Currents - Caravel**
- II. The European impulses of discovery:**
 - A. Crusades**
 - B. Renaissance**
 - C. Reformation**
 - D. Rise of nation-states & mercantilism**
 - E. Commercial revolution**
- III. The European, the Africans, and the Americans: Cultures in conflict of race, religion, and free agency.**
- IV. Oceanic explorations of fifteenth & sixteenth centuries**
 - A. Motives: God, Gold, and Glory! (not in order)**
 - B. Iberian conquest and impact on the new world.**
 - 1. Defeat of Moors**
 - 2. Conquistadors**
- V. The colonization process: 1607-1732**
 - A. Spanish**
 - 1. Mexico and Southwest**
 - a. Missionaries and missions**
 - b. Presidios and Pueblos**
 - 2. St. Augustine**
 - 3. “God, Gold and Glory”**
 - B. French**
 - 1. Giovanni Verrazano**
 - 2. Jacque Cartier**
 - 3. Marquette and Joliette**
 - 4. Coureur de Bois**
 - 5. Jesuits**

C. Dutch

1. Henry Hudson
2. Peter Stuyvesant -New Amsterdam (later New York)

D. English

1. Roanoke Island – profit joint stock companies
2. James Town – profit
3. Religious freedom

E. Others

VI. Spain: Imperial (Viceroy), Church, and military

VII. Exploration in three waves -

1. Columbus to Balboa
2. Cortes in Mexico
3. Pizarro in South America

VIII. Why they came:

- A. Spanish: used and abused natives – Came for Gold, God and Glory
Natives always against Spanish unless dislike natives on other side
- B. French: Lived with natives and exchanged cultures and natives they would side with
French unless dislike natives on other side
- C. English: Removed natives - Indifferent unless saw advantage
- D. Native Americans saw the new people as an opportunity against others never in
long terms

IX. Mercantilism: Silver, Sugar, Tobacco, and their consequences.

A. Spanish empire in the New World

1. St Augustine, Florida
2. Rim of Christendom--the American Southwest
3. Missions, pueblos, and presidios
4. The motives: God, Gold, and Glory [not in that order]

B. French competition for empire:

1. Giovanni Verrazano
2. Jacque Cartier
3. Marquette & Joliet
4. Cour de Bois
5. Jesuits

C. Dutch exploits in America

1. Henry Hudson
2. Peter Stuyvesant-New York

D. English move West:

1. Religious discord provides the impetus
2. Establishment of joint-stock companies
3. Jamestown - mercantilism
4. Massachusetts - Pilgrims & Puritans

CONCEPTS, NAMES, TERMS, AND TOPICS FOR TESTING:

Bartholomew Diaz

Columbus

Magellan

Coronado

Drake

Cartier

Joliette

Humphrey Gilbert

Lord Baltimore

William Bradford

Governor Berkeley

Lutheranism

Quakers

Renaissance

Indians

**Mayflower Compact
headright system**

Da Gama

Vespucci

Pizarro

Cabot

Henry Hudson

La Salle

Jesuits

John Smith

Sir Walter Raleigh

Miles Standish

Maryland Toleration Act

Puritanism

Joint-stock company

Reformation

Africans

covenant theology

Squanto

Cabral

Cortes

De Soto

Frobisher

Verrazano

Marquette

Franciscans

John Rolfe

John Winthrop

Balboa

Calvinism

Pilgrims

Gov. Andros

Crusades

Europeans

Marco Polo

Notes:

Native America:

Came to the New World in four waves of migrations by a land bridge that ended some 10,000 years ago. The oldest archeology evidence of settlement in the new world is about 27,000 years ago and the date is found from Alaska to the tip of South America. The evidence for four waves of migration is that there are four basic language patterns in the Americas that divide into several thousand languages.



Yet, looking at the blood types one can see there was a progression of movement from the north to the south. Blood type "O" is common throughout the Americas followed by Blood type "A" into Canada and northwest with a few pocket in in the U.S. territory. There is an absent of Blood type "B".

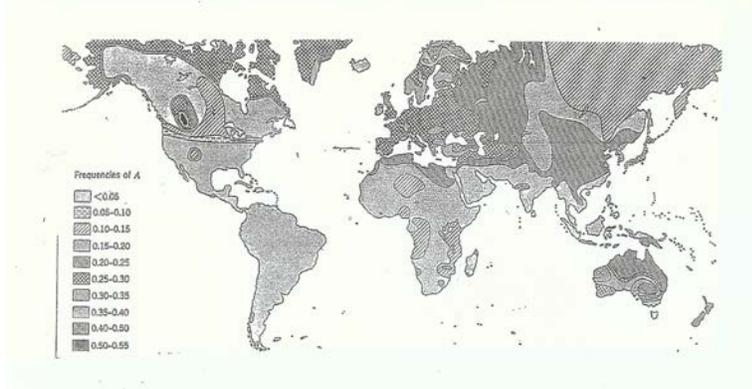
Blood Types of Native Americans before 1492 - Native Americans have one blood type "O". There is some blood type "A" around the Alaska and a few pockets such as the (Black Foot or Black Feet). There was no blood type "B" in the Native American populations before 1492.

BLOOD TYPE "O"



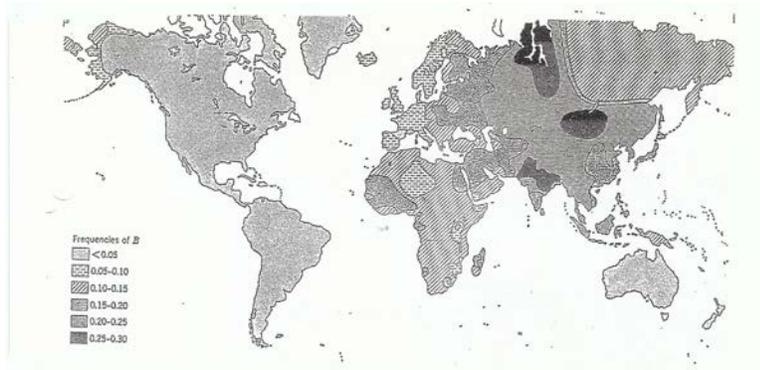
BLOOD TYPE "A"

"A" blood type found in small pockets (Blackfoot/Blackfeet)



BLOOD TYPE "B" (youngest)

"B" not in the Americas before 1492



There are also theories for the settlement of the new world by ocean going explorations by early peoples. First, Pacific Islanders moved across the Pacific Ocean as far as Easter Island. Secondly, there are stories of Japanese and Chinese sailors off the west coast of North America. Finally, some have suggested that Africans seafarers reaching the Americas based on native art work. Or maybe all types of arrival are right!

Asia

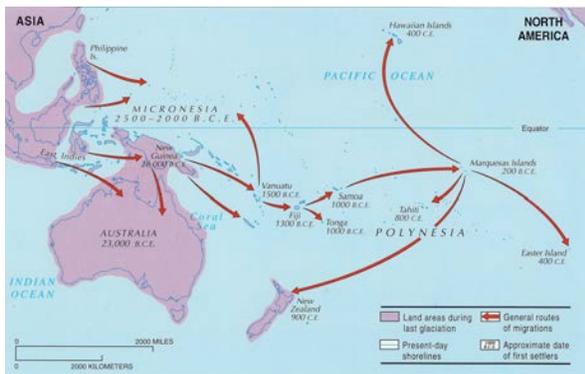
Native Americans – “land bridge” in 4 waves

*Pacific Islanders?

One can sail to America from Asia and almost never leave the sight of land. However, from Europe the same condition does not exist.

China: Compass invented – Cheng Ho sailed for the Ming dynasty in the early 1400’s with a fleet of 317 ships. The largest being 444 feet long and 180 feet wide with 9 mast.

In 1443 the leaders of China forbid the sailing from Chinese waters ending Chinese exploration.



Pacific Claim



Admiral Zheng's claim

Who were the Red Paint People? Mystery 6,000 ago

Native Americans before 1492

When did they arrive – Last Ice Age (Wisconsin Glacier) - Land Bridge

Bering Sea land bridge ended with the last Ice Age (Wisconsin) around 10,000 years. Cutting off the flow of people from Asia to the New World. There were four waves of migration. There are four basic language groups in the New World and the blood types are a result of this migration.

Native Americans (27,000 years ago) Four waves from Asia during the Last Ice Age (Wisconsin Glacier) – distinct lineages in DNA with 4 basic languages – No type (B)

Language Formed from four basic language groups that have:

- a. 200 sub-languages in North America + sign
- b. 350 sub-languages in Central America
- c. 1,400 sub-languages in South America

*Note language is made up of:

- 8% words
- 37% sounds
- 55% body

*Native Americans spoke in ACTION not TIME as did the Europeans. Native Americans their language needed to have action and movement.

Example:

Native American speak in action:

What did they eat

Or

How did they eat

Europeans speak in time

We will eat

Or

They are eating at

Or

They ate at

Natives Americans were in the Stone Age development in 1492

Early cultures

1. Polytheistic - Shamans would interpret the spirits and all things alive had a spirit for good or bad – man was linked together
 - a. Earth was the Mother
 - b. Sun the Father
2. Hunter-gathers Trade was a means of ensuring goodwill (Gift Giving) was a give and take society.
 - a. Kinship
 - b. Bands - Small tribes
 - c. Basket making started around 200A.D.

3. Agriculturalist

- a. Slash and burn - Semi-sedimentary
- b. Corn documented its own history 25,000 years ago and domesticated around 5,000 B.C.
- c. Potato (food of the humble) with 5 or 6 varieties –today there are some 1,000 varieties – European believed it caused leprosy.
- d. In 1744 Fredrick the Great order it grown for the poor. The Irish had it as main diet 1-14 pound per day until the Blight in 1845.

4. Leadership in North above Mexico was in authority -

- a. Power is taken
- b. Authority is given

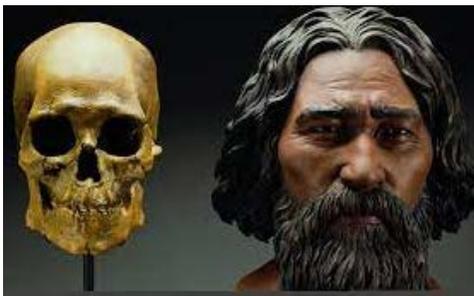
Early Native Americans were from Asia?

One mystery is the Kennewick man:

Bones were found on Columbian River in Washington State – he was found to be 11,500 years old and looked like the Ainu the original inhabitants of Japan – they still can be found in northern Japan today and look more European than Asian. Native American did not like this discovery.

Kennewick man found on Columbian River in Washington State – he was found to be 11,500 years old and looked like the Ainu the original inhabitants of Japan – they still can be found in northern Japan today and look more European than Asian. Native American did not like this discovery. The Native Americans were not victims of European colonization. They were opportunist that saw the European as leverage against other rivals for territory or to gain power. The Aztecs Empire were defeated by only European warriors. Natives that were held under Aztec rule willing join the Europeans on the march to the Aztec capital. The Inca civilization ended with a civil war that the Europeans were a factor in which side won. Both of these Native empires collapsed when the central authority disappeared as a power base. The cities that had been the focal point for taxes cease to draw the local population to the city and were abandon.

Kennewick Man



Ainu individual (original native of Japan)



Mayas – Yucatan, Belize, Guatemala, El Salvador and Honduras

- 1. Calendars**
 - a. Religious–260 days year in 20–13 day months with 5 at the end**
 - b. Agricultural – 365 days – within .0002 of today’s calendar**
- 2. They had a numerical system with the zero in units of 20**
- 3. Pre-Classic period 1250-450 B.C.**
- 4. Late pre-classic 450-300 B.C. start of civilization**
- 5. Classic period 300 B.C. – 900 A.D.**
- 6. engineers**
- 7. Kukulkan (Koo-kool-KAHN) – Quetzalcoatl**
- 8. City-State authority Halach Uinic (hah-LAHCH-oo-ee-NEEK) Great Lord or True Man absolute hereditary ruler – 6-7 defined social classes – ritual core of city – pop (woven mat) symbol of royal authority – Tikal (tee=Kahl)**
- 9. Sky held by four trees on back of crocodile with 13 layers of heaven and 9 layers to underworld – smoke carried message to gods**
- 10. Largest temple El Mirador 55 meter high (180 feet) – El Castillo has 365 steps to the top**
- 11. Cross eyed was a beauty mark to help by dangling objects in front of babies eyes and front teeth filled with gems**
- 12. Abandoned cities between 850 – 900 A.D.**
 - a. Warfare**
 - b. Epidemics**
 - c. Natural disaster**
 - d. Invasion from outside**
 - e. Over population**
 - f. Over production of farm land**
- 13. Book on inside surface of bark - 800 picture graphs**
- 14. Destroyed by priest later only after copied**

Aztec – The god called Quetzalcoatl was light skinned would return in year One





Aztecs Empire Expansion:

1. **Controlled area by 1400's – Lake Texcoco**
2. **Did not try to absorb conquered into Aztec society**
3. **Class or caste system**
 - a. **Emperor** **Priest as advisors**
 - b. **Nobles**
 - c. **Warriors**
 - d. **Ordinary free**
 - e. **Serfs**
 - f. **Slaves**
4. **Tribute not colonization – Flower Wars**
5. **Quetzalcoatl (ket-zeel-oe-POTCH-tee) world destroyed 4 times and created 5 times in 52-year cycle**
6. **Year Reed One – return from east (beard and light skinned)**
7. **Tenochtitlan (tay-noch-teet-LAHN) capital**
8. **King elected and was met face down – death to see his face**
9. **King smoked before decisions – king could not overrule a judge**
10. **Engineers who built canals, temples, hill terraces, irrigation systems, aqueducts, sewers, floating gardens and fountains**
11. **Education highly valued – schooled until 15 boys and girls**
12. **Religion some 63 gods – world shaped in five box like structure – world held together by blood – self-sacrifice in bleeding tongue and ears – higher the birth the more blood needed**
13. **Tlaloc (TLAH-lok) god of rain**
14. **Huitzilopochtli (WEET-zeel-oe-POTCH-tee) god of Sun**
15. **Sacrifice – Fire 1st day dance – 2nd day drugged – burned in pit and roasted – before death pulled out with hooks and heart cut out - blood needed – Pyramid of the Sun 235 feet high – 700 feet at base with 220 steps – dedicated with 80,000 lives – random terror may have been a method of control conquered**
16. **Malinche (mah-LIN-tsin) Aztec noble woman sold into slavery – Cortes called her Dona Marina – she was good with languages that allowed Cortes to communicate with native populations that hated Aztecs**

Inca Empire:



Periods

Archaic period 7000 – 2500 B.C.E.

Pre-classic 2500 – 1 C.E.

Classic 1- 1000

Post Classic 1000 - 1500

South America Civilization - Pachacuti first ruler or Inca 1438

- A. Incas controlled area that included Chile, Peru, Ecuador, Bolivia, and Argentina by 1532 – 100 ethnic groups – 20 languages**
- B. Made the conquered into Inca's in language and religion – resettle within empire to control and spied on – not allowed to travel**
- C. Cities used to pay tax in labor – capital Cuzco (kOOZ-kuh) cities held small permanent populations**
- D. Engineers built 55,000 miles of road and bridges – roads sweep clean every day – to burn a bridge was death sentence – message could be carried 2,000 in seven days by relay**
- E. Medical – doctors did brain surgery – if patient died doctor tied to him and left on beach – coca used as pain killer**
- F. Had a public health system and inspections**
- G. Decimal system – calendar**
- H. Universe was a box world – Sun most important – temples walls covered in gold**
- I. Agriculture allow surplus**
 - a. 300 varieties of corn**
 - b. potatoes at 4,000 feet, corn at 2,500 feet, and cocoa at 800 feet**
 - c. first to freeze dry food**

North American Civilizations (Golden Age collapsed before 1942)

- A. Clovis – 37,000 B.C.E. - leaf shape arrow head for large animals**
- B. Folsom – 10,000 B.C.E. – Spear or dart shape arrow head for smaller**
- C. Plain View Point – 9,000 B.C.**
- D. Anasazi (Old Ones) – 1,500 B.C.**
- E. Hopewell & Mississippi mound builders – 400 B.C.**
- F. Hohokam – 300 B.C.**
- E. Northeastern – Iroquois League**
 - a. Golden Age and collapse - Dark Ages native civilizations in collapse by 750-1000**
 - b. Reasons?**
 - 1. Famine**
 - 2. Over Population and use**
 - 3. Warfare**
 - 4. Golden Age over by 1492 in North America – Europeans saw “Virgin Land”**
- F. Southeast:**
- G. West Coast:**
- H. Northwest:**
- I. Great Plains:**
- J. Deserts:**

Common features of native Americans

Physical features - Look the same – DNA distinct lineage

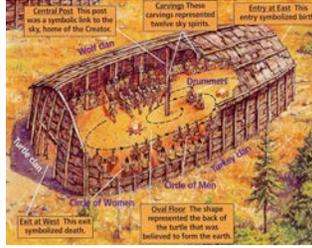
Religion

- 1. Earth mother**
- 2. Sun father**
- 3. Shamans interpreted spirits and nature**
- 4. Spirits in all things and had good and evil magic**
- 5. After life continued in next world – would meet again**

Warfare

- 1. Reasons for War**
 - a. Brides**
 - b. Territory**
 - c. Honor**
 - b. Labor and Ranking**
- 2. Warriors formed into groups - Chief had difficult time getting individuals to work together in war – battles became many small battles with individual glory – rather than a common objective as Europeans fought wars.**
 - a. Mutilation was a way of making enemy no longer a danger in life and death**
 - b. Death is not in the language- lose of individuality -disturb and interrupt harmony**
 - c. Gift Giving and social stability – Bride Price - Trade ensured goodwill**
 - d. Spiritual – Shamans – healers - Sand painting**
 - Shamans would interpret the spirits and all things alive had a spirit for good or bad – man was linked together. Roman Nose would not fight for 24 hours after metal touched his lips. The one time that he did - he was killed in battle**
 - e. Earth was the Mother and the Sun the Father**

Huron and Iroquois North America Northeast



Iroquois - New York, Pennsylvania to Great Lakes and Ohio Valley were under their control. They lived behind a stockade in long houses 50-100 feet long that held 8-10 families. Women held power and passed from mother to daughter. They controlled house and fields as well as arranged marriages and selected chiefs. By 1300 formed into 5 nation league.

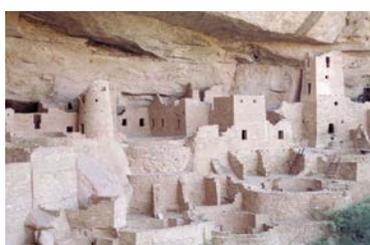
Members: Onondagas, Cayugas, Mohawk, Oneidas & Seneca's then in 1711 the Tuscarora's joined the league

Games - Lacrosse 6-7 hundred men on teams and play part in ceremonial calendar

Southeastern



Southwest



Pueblo “Seven Cities of Gold?”



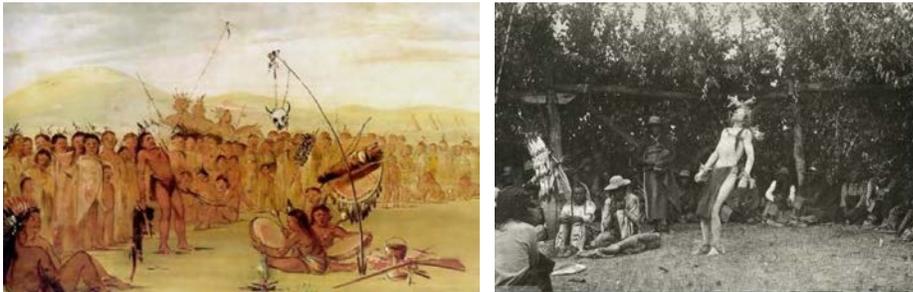
Plains Natives



Big Horn, Wyoming - Medicine Wheel - Solar observations?



Sun Dance ignition for warriors and spiritual act – Sitting Bull went through this ceremony a number of times



The horse changed the Plains Native life

Buffalo – before the horse was introduced the hunt practice was to run the herd off a cliff



Buffalo Jump

Plains Indians change with European expansion to Horse cultures:

Buffalo value to plains Indians:

Clothing: Robes

Caps
Moccasins
Leggings
Mittens
Shirts
Coats
Underclothes
Dresses

Ceremonial: Skulls

Hide
Horn

Recreational:

Ribs – ice sled runners
Bones - dice
Hair – stuffing for ball
Hide – for ball

Weapons: Hide – Shield

Bone – arrowhead
Horn – powder

Tools:

Shoulder Blade - hoes
Bone - knives
Tongue – hairbrush

Medical: sweat lodge

Comanche – remedy for T.B.
Pawnee – remedy for headache
Ute – cuts and bruises

Ceremonies: Sun Dance

Ghost Dance

In North America the native populations saw the opportunity that the Europeans posed for alliances and trade goods. The Lewis and Clark expedition was in part a political move to ally the western tribe to the United States. Lewis and Clark were not the first to cross the continental territory that was done by the English in Canada. The natives saw Lewis and Clark as a way to defeat the Blackfoot (Blackfeet) nation that controlled the western territory.

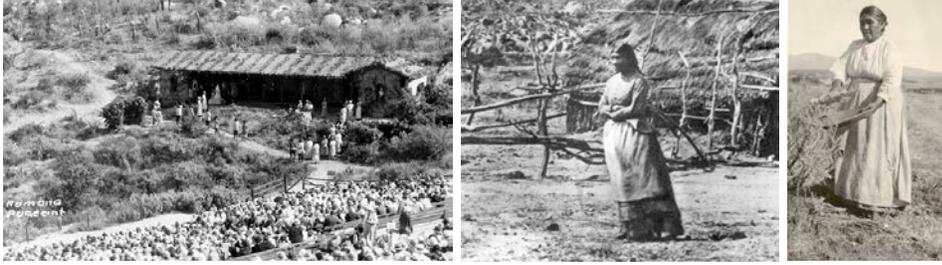
The native Americans out traded the Lewis and Clark on the expedition.

The Last of His Tribe “Ishi (California Native) he was found in a barn in Oroville and sent to study his culture



Love Stories Between Native Americans and Europeans:

***Ramona* love story between Native and Spaniard – Play every year in Southern California**



**A lost ‘Love Story’ of Russian Noble and California Spanish
Maria Concepcion Arguello and Count Nikolai Petrocivh Rezanov**



He was recalled to Russia and died there never to return. She waited for him and later became a Nun

Agriculture in Old World

A. Human domestication of Plants

- 1. Fertile Crescent 7,500 B.C. – Tigris/Euphrates Rivers**
- 2. Nile River**
- 3. India**
- 4. China**
- 5. Plant results**
 - a. artificial selection of larger plants**
 - b. higher yields and shorter growth time**
 - c. loss of natural dissemination – larger seeds do not split open easy**
 - d. more palatable plant – taste**
 - e. loss of plant protection**
 - f. climate resistance**

B. Farming methods

- 1. “slash and burn”**
- 2. two crop rotation**
 - a. wheat cannot be grown 2 years running in same field**
 - b. winter wheat 1st**
 - c. oats 2nd**
 - d. fallow – livestock**
 - e. yields**
 - 1. Germany**
 - a. wheat 8.7**
 - b. rye 7.6**
 - c. barley 7.0**
 - d. oats 3.7**

C. Manures

- 1. livestock in west**
- 2. night soil (human) in east**
- 3.**

D. Calories

- 1. Man requires 3,500 to 4,000 per day**
- 2. in 1700 they had 2,000 per day**
- 3. 1750 three crop rotation – turnip introduced in fallow field**
- 4. Rice 80% to 90% of diet in 5,000 B.C.**
- 5. Wheat 50% to 70% of diet in 2,000 B.C.**
- 6. Corn is quick to grow and edible before ripe**
- 7. cotton 40 species of long and short**

Agriculture New World

Corn domesticated around 5,000 B.C.

Potato domesticated with 5-6 varieties

- a. **Today there are some 1,000 varieties**
- b. **Early Europe believed it caused Leprosy**
- c. **Fredrick the Great order it grown for the poor in 1774**
- d. **The Irish had it a main diet 1-14 pound per day – Blight**

Basket making started around 200 A.D.

Human domestication of plants was around 7,500 B.C.

- **artificial selection of plants allowed higher yields and shorter growing time**
- **better taste**
- **loss of plant protection**
- **smaller seeds**
- **climate resistance**

Slash and Burn farming

Manures: West livestock / East night soil (human)

Two-crop rotation gave way to three-crop rotation in 1600 century Turnip Townsend – of the Townsend Duties

Wheat cannot be grown 2 years running in same field –

Winter wheat – Oats – fallow

Man requires 3,500 to 4,000 calories per day in the 1700's the average man had 2,000 calories per day

Corn can be eaten before ripe

Cotton – 40 varieties

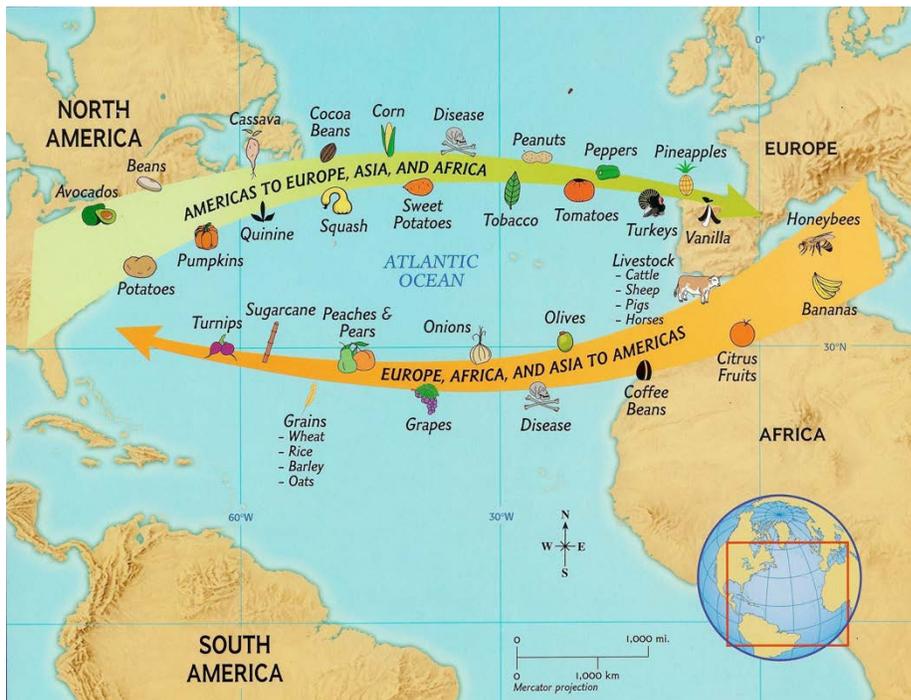
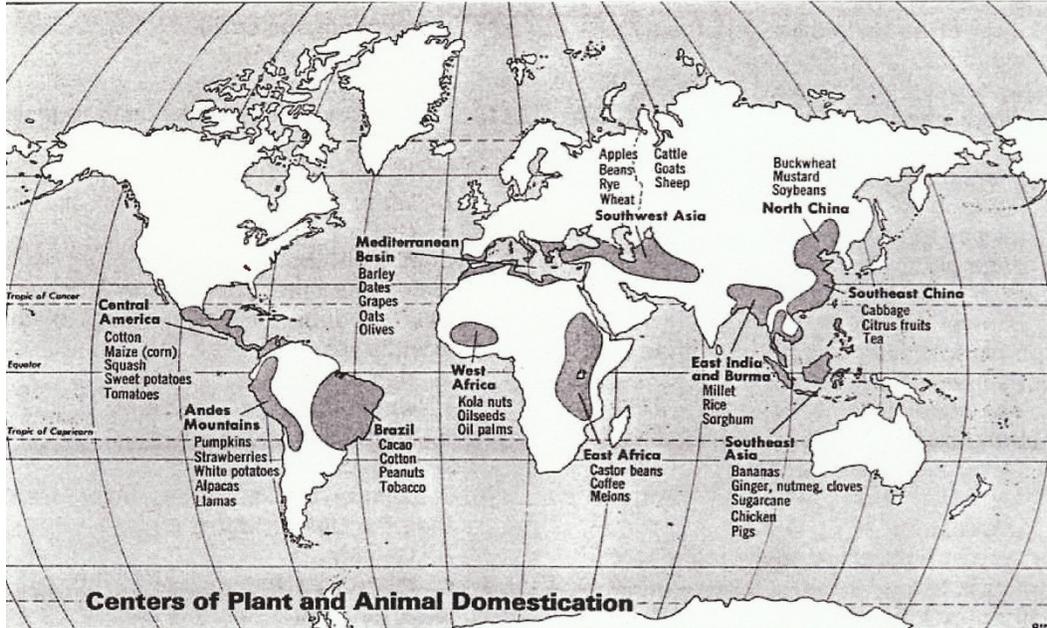
Corn documented its own history 25,000 years ago and domesticated around 5,000 B.C.

Potato (food of the humble) with 5 or 6 varieties –today there are some 1,000 varieties – European believed it caused leprosy – 1744 Fredrick the Great order it grown for the poor. The Irish had it as main diet 1-14 pound per day. Blight 1845

Doubled food supply – corn and potato from New World and Wheat and Rice from Old World - Corn and potato grow in climates that wheat and rice will not grow

Doubled Food supply and population explosion – Children needed as more workers for the land

Columbian Exchange



Old World Foods

and

New World Foods

Apple
Beet
Cabbage
Carrots
Celery
Cucumber
Eggplant
Grapefruit
Lemon
Peach
Plum
Olive
Sugarcane
Wheat
Rice
Coffee
Oats
Grapes
Dates
Barley
Rye
Tea
Sorghum
Soybeans
Mustard
Buckwheat
Melons
Castor Bean
Kola Nuts
Bananas
Chickens
Ginger
Pepper = grain from paradise
Nutmeg
Cloves – spices used to cover taste
Salt used by all

Persimmon
Beans
Bell % hot peppers
Blueberry
Cranberry
Maize (Corn)
Manioc
Papaya
Pineapple
Pumpkin
Squash
Sweet Potato
Tobacco
Tomato
Cotton
Vanilla
Chocolate
Peanuts

Animals

Horses
Cows - Cattle
Pigs
Sheep
Goats
Large Dogs

Lama
Alpacas

Old world animals are larger than new world
New World Monkey has a prehensile tail

Bacteriological invasion:

Small Pox –	Arrived in	1519 in Mexico City	1530 in Peru
Measles			
Influenza			
Dysentery			
Leprosy			
Plague			
Elephantiasis			
Typhoid			
Venereal Diseases			

Smallpox

Transmission is direct body contact; body fluids contaminated objects and rarely by air in enclosed space. Incubation period is from 7 to 17 days and one is not contagious during this period. The first symptoms include fever, malaise, aching body and sometimes vomiting. A fever will stay high for 2 to 4 days. A rash first emerges as red spots on the tongue and in the mouth, this is the period one is most contagious for around 4 days. During this time the spots develop into sores that break open and spread the virus through the throat. Causing a rash to appear in the skin from head to toe. The fever will fall during this time. The third day of the rash becomes raised bumps. By the fourth day the bumps fill with opaque fluid and have a depression in the center that looks like a bellybutton. Then the fever will rise once more and remain until the bumps form scabs. The bumps become pustules and raise and are firm to touch. By the second week the pustules have all formed a crust and begin to fall off. A person is contagious until the last scab falls off. The death rate in the old world was 3 out of 10 died. The new world natives had a much higher rate because of less antigens in the blood system. (blood types).

There are no smallpox virus in the human population today. The U.N. reported the last case in the world in Somalia in 1977 after a worldwide vaccination program to eradicate the disease. There are however laboratories that have the virus for research precaution if the disease reappears in the human population. There is the fear of a bioterrorism attack such as the one in October of 2001 and 911.

CDC National Immunization Information: www.cdc.gov/smallpox