

How, when, and where did we become human?

- Meet our closest ancestor, *Homo erectus*.
- *Homo erectus* was one of the hominid groups that was developing increasingly large brains in both Africa and Asia between about 500,000 and 200,000 years ago.

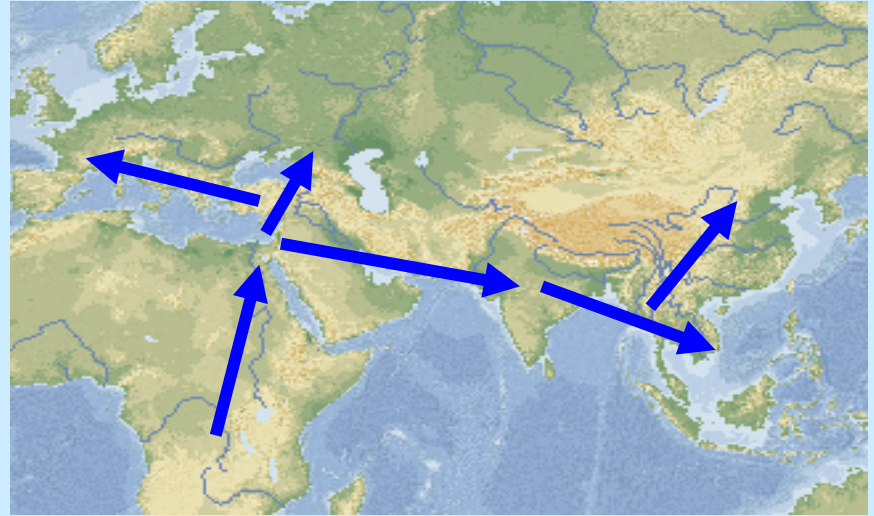


This is a reconstructed *Homo erectus* skull, found in northern China. It dates to some time after 1.6 million years ago.



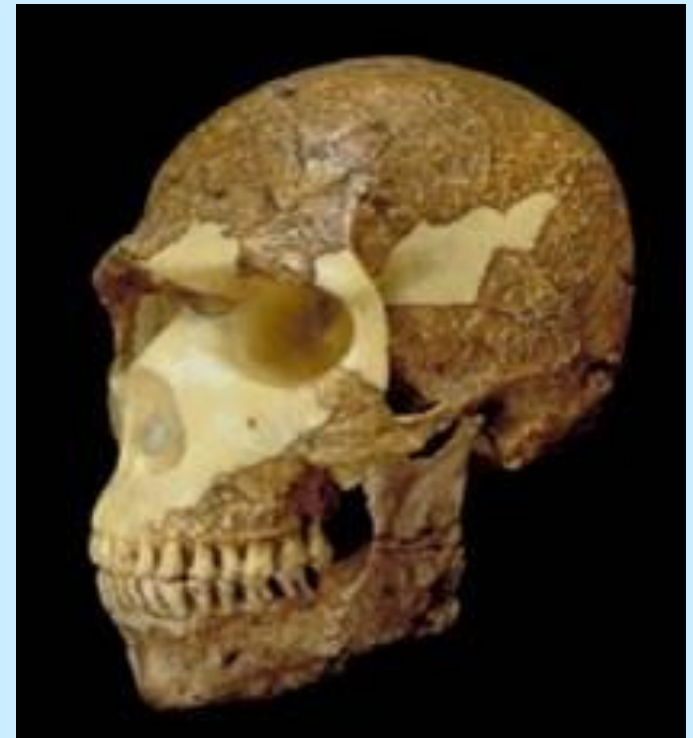
Homo erectus was a traveler!

Homo erectus began migrating to southerly parts of Eurasia sometime after about 1.8 million years ago.

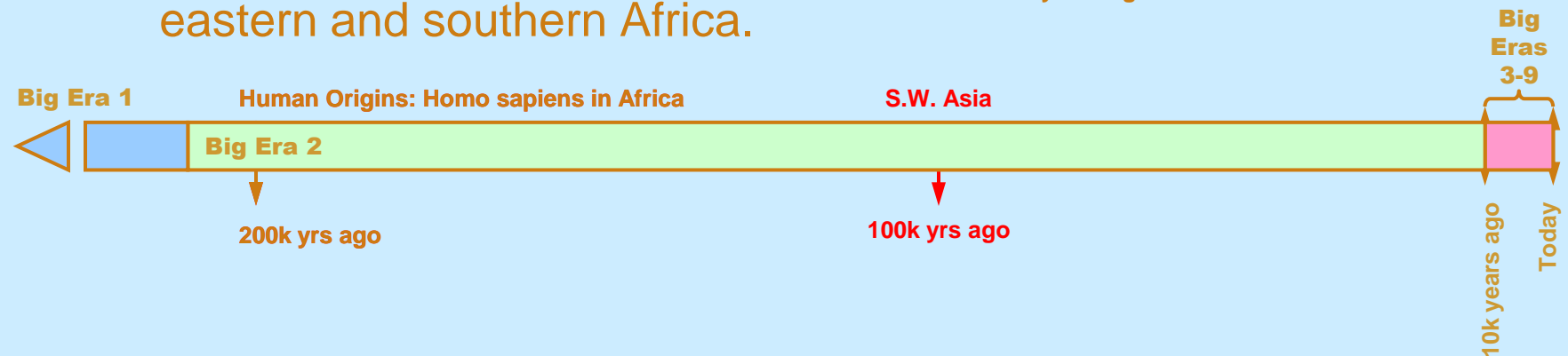


Homo sapiens (that's us!) evolved from *Homo erectus*

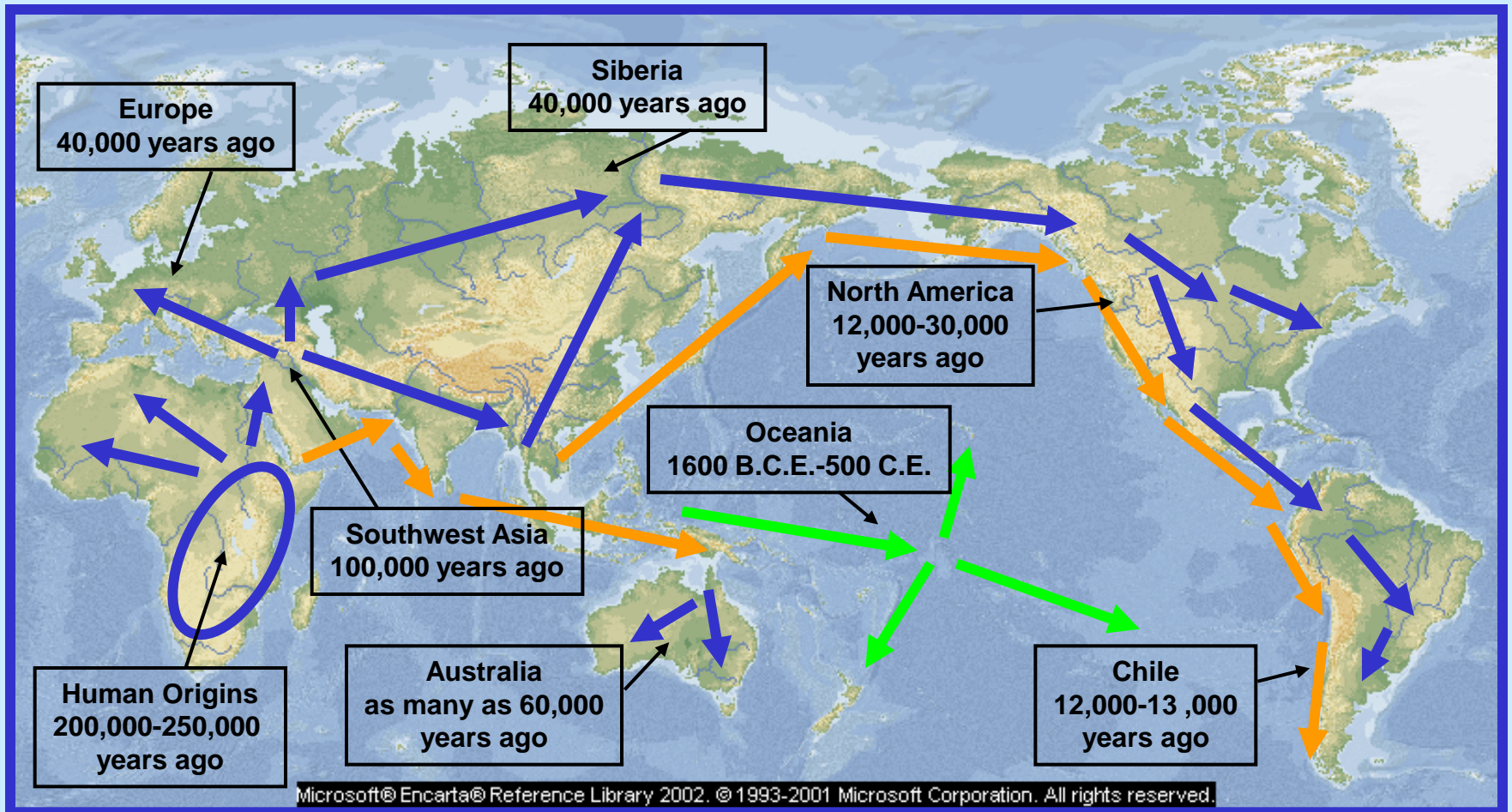
- By 200,000 years ago, people whose skeletons were like those of *Homo sapiens* were already living in Africa.
- Between that time and about 100,000 years ago, people who were both anatomically and genetically “like us” emerged in eastern and southern Africa.






This is a reconstructed *Homo sapiens* skull, found in Israel. It has been dated to about 90,000 years ago.



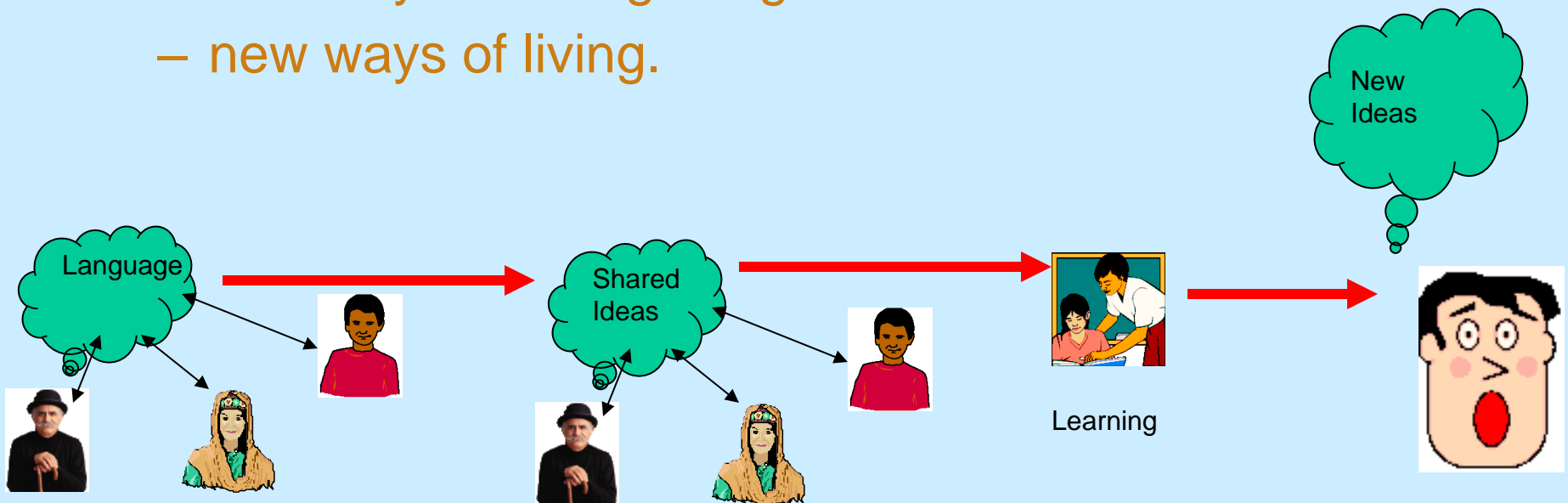
Migrations of Homo sapiens



-  Possible coastal routes of human migration
-  Possible landward routes of human migration
-  Migrations in Oceania

Why were homo sapiens able to travel?

- *Homo sapiens* had language
 - so they could exchange complex ideas with each other.
 - and they could store and add to the ideas of previous generations.
- Because they swapped ideas, they kept finding
 - new ways of doing things.
 - new ways of living.



Language made collective learning possible.

- The stores of knowledge and skills humans built up are called “culture.”
- No other animal can store and accumulate knowledge and skills in this way.
- We call this ability “collective learning.”

Storing up and building on new skills and new knowledge is what set our species on the path of continuing cultural changes that led to the world we now live in.



Towers, Kuwait City, Today



Great Zimbabwe, Southern Africa, 1300-1500 CE



Monte Alban, Oaxaca, Mexico, 200 BCE

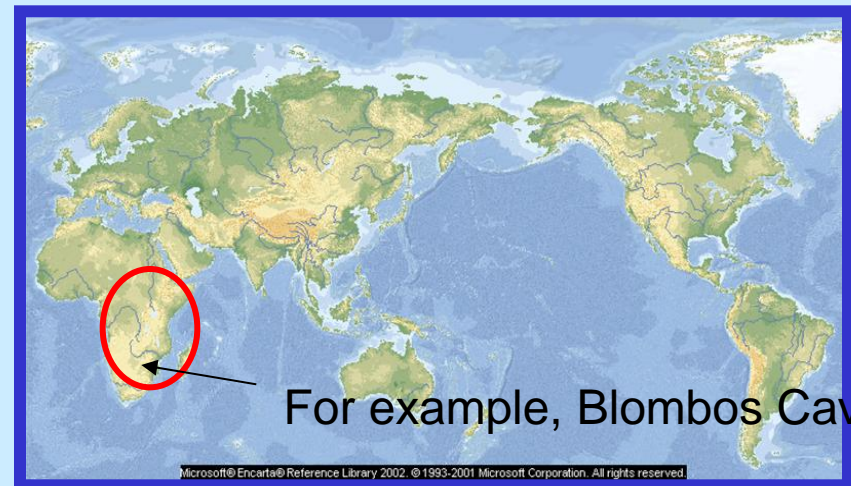
How did collective learning change human culture?

At first, changes in technology were very slow.

After about 100,000 years ago, the pace of change began to increase.

Evidence appears from about that time of humans living in east, central, and southern Africa. They were:

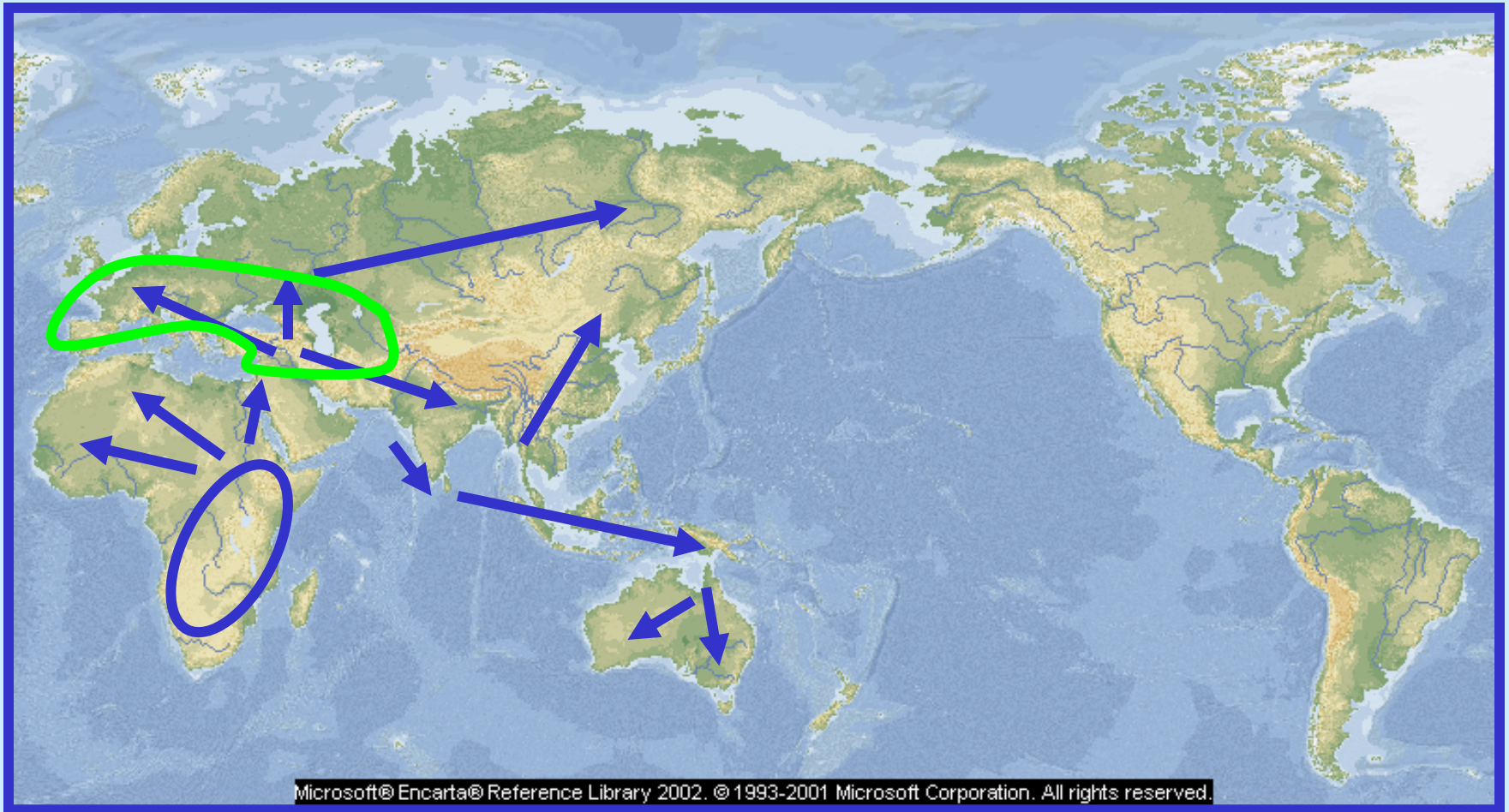
- Making more advanced and varied tools.
- Experimenting with body decoration and abstract symbols.
- Began burying their dead

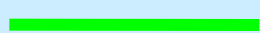



For example, Blombos Cave

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Did Homo sapiens meet Neandertals?



-  Approximate geographical range of Neandertals, 100,000-28,000 years ago
-  Approximate geographical range of *Homo sapiens* by 28,000 years ago

- Members of the two species may have met in Southeast Asia.
- The last physical traces of *Homo erectus*, dating to about 28,000 years ago, were discovered in Java. By that time *Homo sapiens* was already living in that region.



Range of last surviving *Homo erectus*

Homo sapiens and other species

- We're not sure what might have happened if *Homo sapiens* met Neandertals or *Homo erectus*, but we do know that these two hominid species died out.
- And so did many other large animals, called megafauna, which once roamed the earth.
- What might these extinctions tell us about our own species?



**Farming and
complex societies?**

**Where did they
come from?**



I thought
we were still
hunting and
gathering!

Farming and complex societies are the result of **CHANGE...**

Let's look for a minute at the changes that took place in Big Era Two.

...and changes have always been—and still are—part of human history.



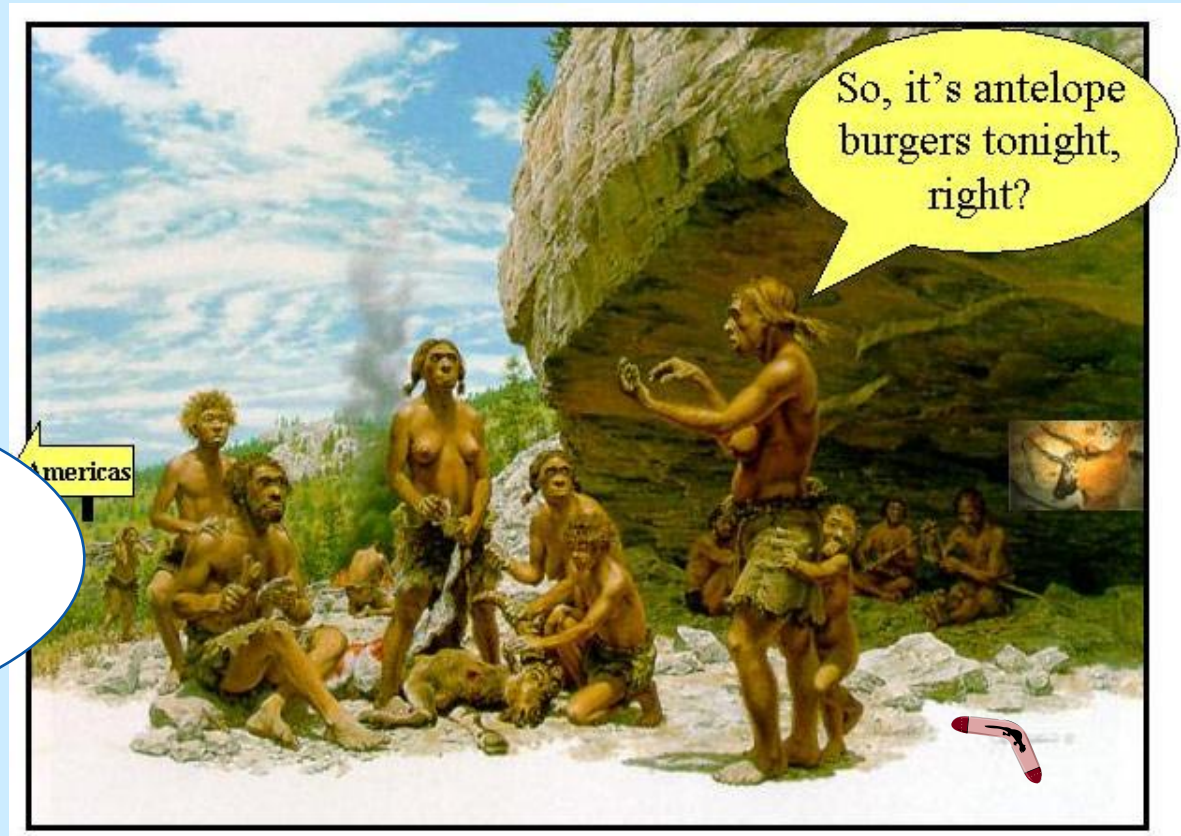


You will probably recall that life 200,000 years ago looked something like this.

Homo erectus doing lunch



10,000 years ago at the close of Big Era Two, life looked more like this:



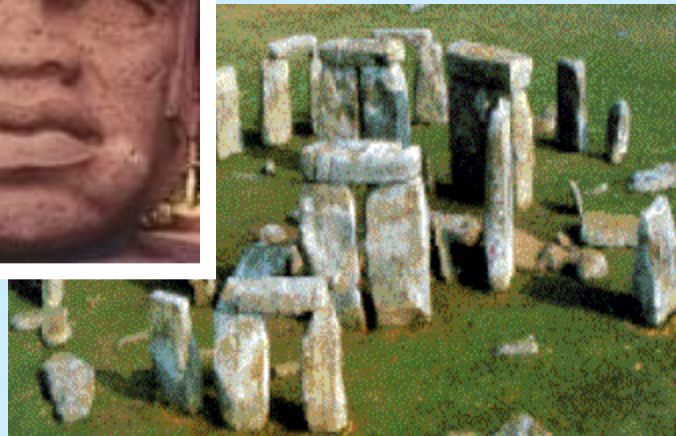
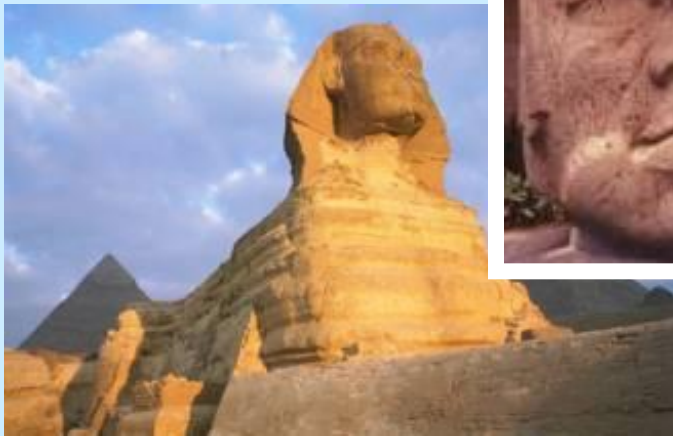
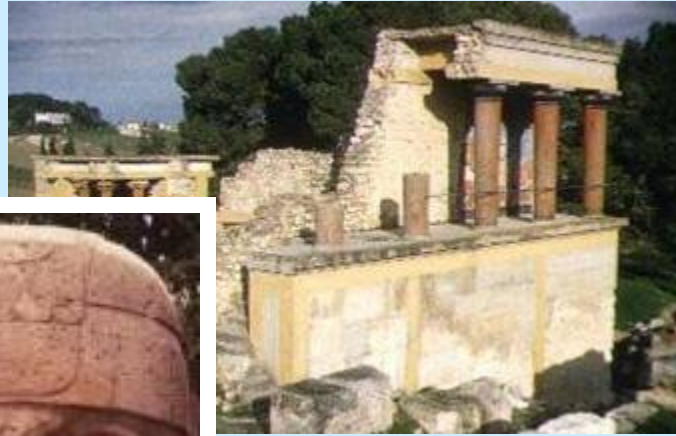
Homo sapiens at home



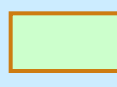
Changes that occurred by 10,000 years ago

1. *Homo sapiens* appear.
2. Language develops.
3. Habitats expand.
4. Technology multiplies.
5. Wall painting and sculpture are created.





Big Era 2



10,000 years ago

Big Era 3

Big Eras 4-9



1,000 years ago Today

One of the major changes is reflected in this frieze on a wall in Mesopotamia (today Iraq) :



which reflects the **DOMESTICATION** of...



animals



and plants



Domestication of plants and animals was a monumental change.

It resulted in the new way of living we know as **FARMING (AGRICULTURE)...**

...which included both **PASTORALISM** (herding sheep, goats, cattle, horses, and camels),

and...

Have you 'herd' about pastoralism?



Big Era 2

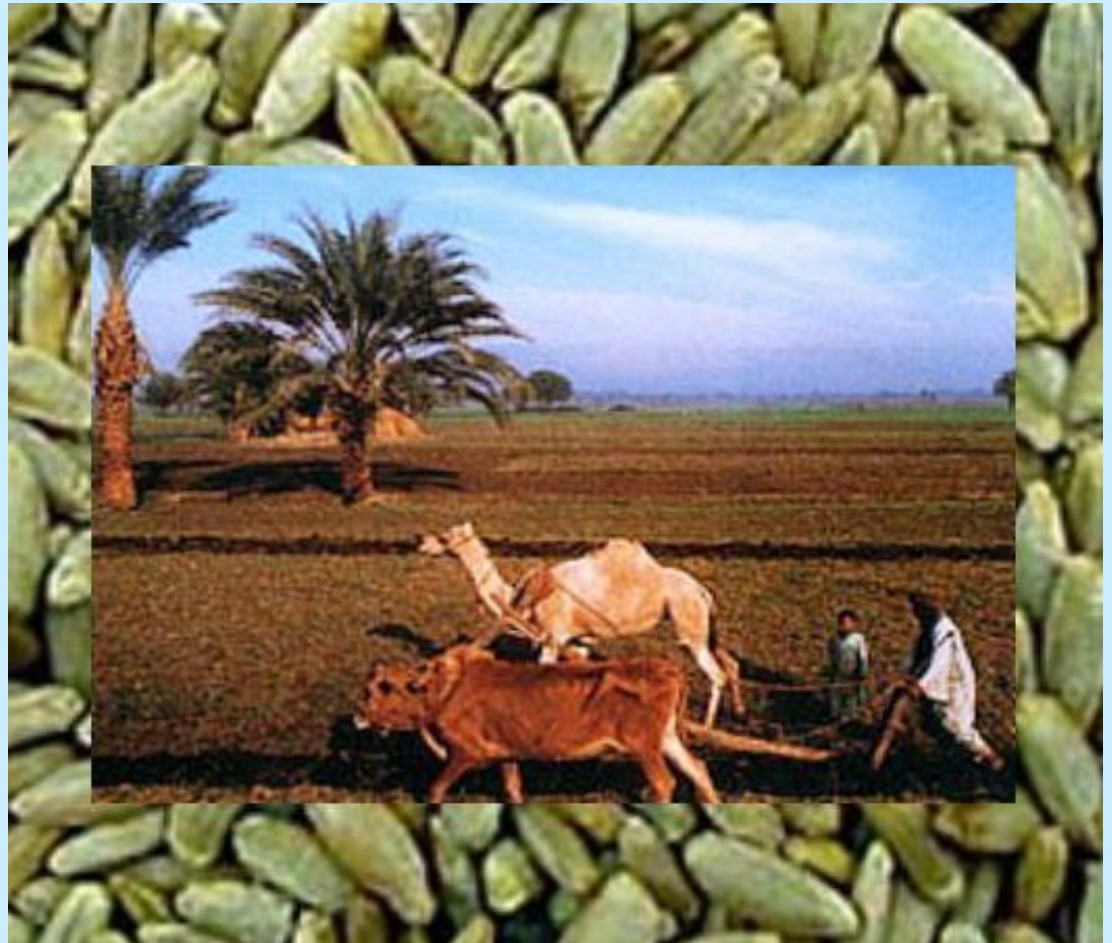


10,000 years ago

1,000 years ago Today

Crop-growing
(cultivating domesticated
plants),

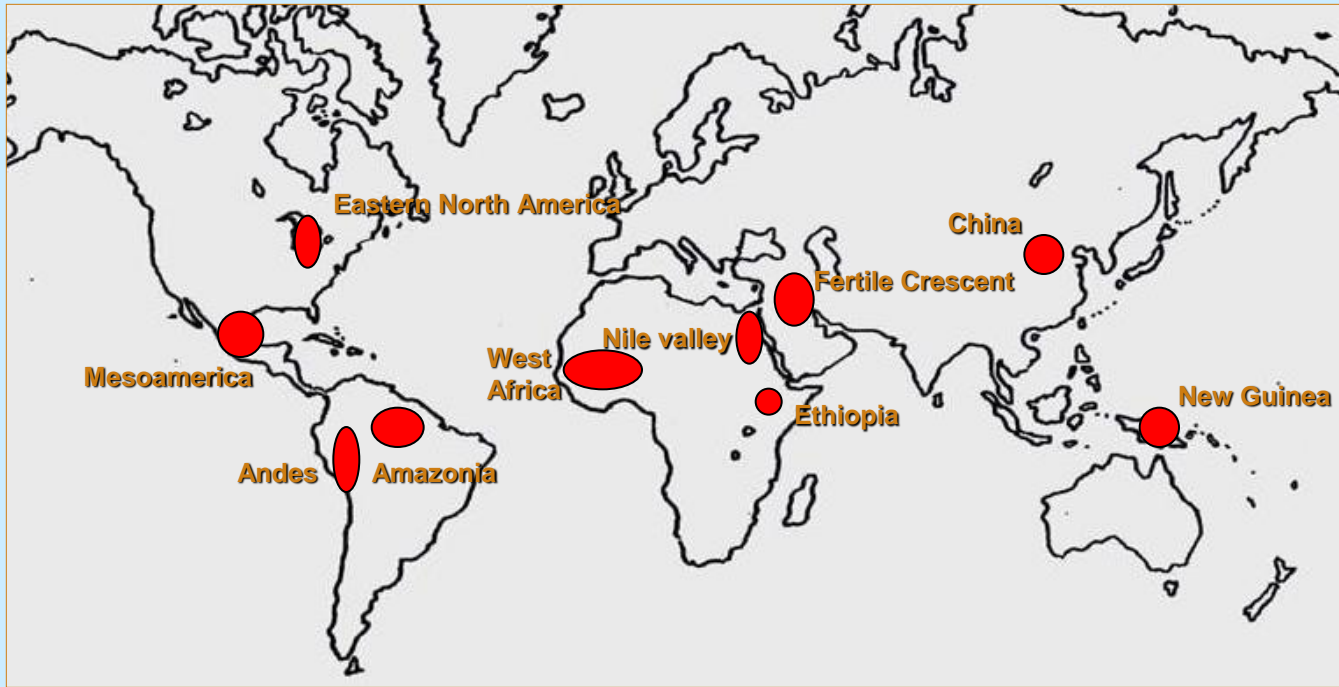
and...



the development of...

FARMING COMMUNITIES





Between about 12,000 and 1,000 BCE, farming appeared INDEPENDENTLY in a number of places, possibly in all of the places marked in red on the map.



Prior to farming, population size in any one area was limited by the availability of wild game, grain, berries, seeds, and nuts.

Farming and the large, relatively dependable crops it provides allowed for...

**POPULATION
INTENSIFICATION**





SURPLUS FOOD PRODUCTION...

...means that not everyone has to grow food or tend animals. They can take on other tasks. They can specialize in some non-farming task.

This is called...

Job Specialization.
Men and women may
become:

- Weavers
- Stone Masons
- Potters
- Priests
- Scribes
- Traders
- Army officers



Domestication of Plants and Animals

Farming

Population
Intensification

Surplus Food

Specialization

Complex Society,
also known as
CIVILIZATION

Big Era 2



10,000 years ago

Big Era 3

Big Eras 4-9

1,000 years ago Today

Elements of civilization include:

1) Cities



CG

Mohenjo Daro

It's the law

3) central Governments and law codes



Pharaohs



Hammurabi's Law Code

CW GR

Elements of Civilization include:

1) Cities

3) central Governments
and law codes



2) Writing and
record keeping

4) highly organized Religions



Elements of Civilization include:

1) Cities

2) Writing and record keeping

3) central Governments and law codes

4) highly organized Religion

5) Art



6) Social structure

Assyrian slaves
In Egypt

Elements of Civilization include:

CW GRASs*

1) Cities

2) Writing and record keeping

3) central Governments and law codes

4) highly organized Religion

5) Agriculture/job specialization

6) Social structure

* Complex Technologies

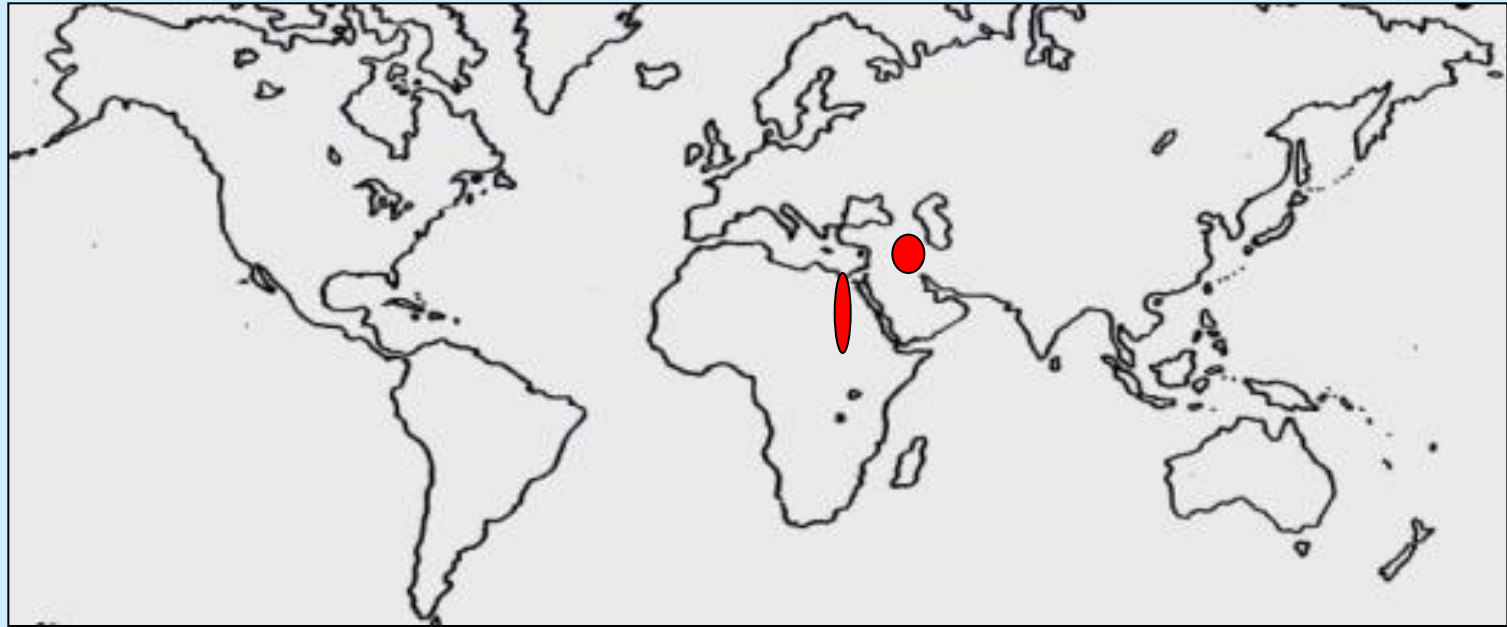


Chariot

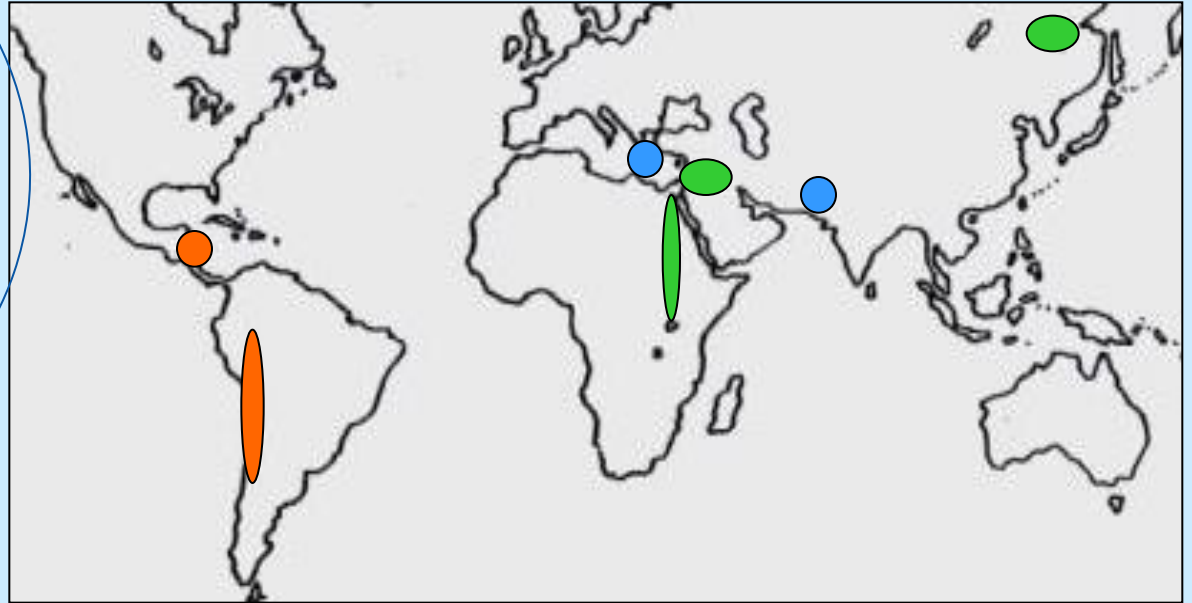


Bronze Sword

By 3,000 BCE, societies in **Southwest Asia** and **Egypt** were developing elements of complex societies.



By about 1000 BCE, there were several well-established civilizations in Afroeurasia.



There were also two new ones in the Americas.

At least two civilizations in Afroeurasia, the Minoan in the Mediterranean region and the Harappan in the Indus River valley had already come and gone.

Domestication of Plants and Animals

Farming

Population
Intensification

Surplus Food

Specialization

Complex Society,
also known as
CIVILIZATION

Big Era 2



10,000 years ago

Big Era 3

Big Eras 4-9

1,000 years ago Today

That translates into:

Farmers
Herders
Cities
Central governments
Armies
Monumental buildings
Written language
Social hierarchies
Complex belief systems

In 10,000 BCE none of these existed in the world. By 1,000 BCE they all did.

Let's focus on two
key developments
at this time.

Population Growth



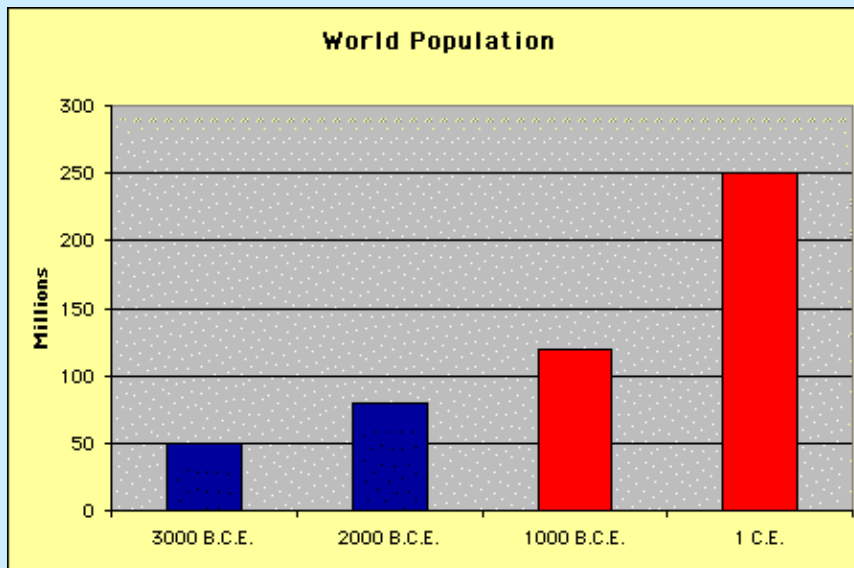
Expanding Networks of Exchange





Population Growth

- Between 1000 BCE and 1 CE world population rose from about 120 to about 250 million.
- This rise was fueled by an acceleration in the *rate* of growth during this time.
- Between 3,000 and 1,000 BCE, it took about 1,600 years for world population to double.
- Between 1,000 BCE and 1 CE the doubling time was less than 1,000 years.





Population Growth

#1
The invention
of iron!

In Afroeurasia, iron axes, hoes, spades, and plows enabled farmers to clear and cultivate millions of acres never before used for farming.





Population Growth

Farming and pastoral nomadism replaced hunting and gathering in some regions.

People moved into previously uninhabited areas.

#2
Farming and pastoral nomadism!





Population Growth

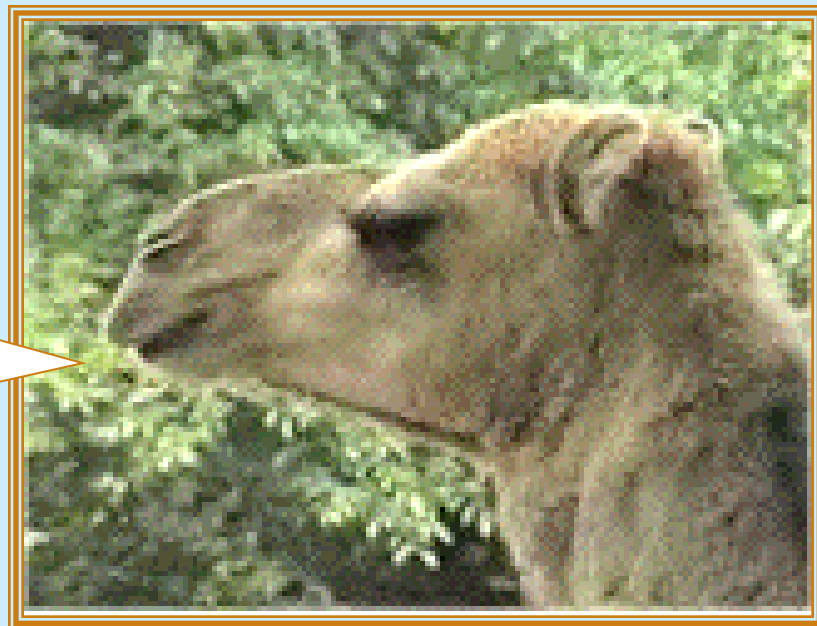
#3
Improved
species of
crops
produced
more food per
acre!





Population Growth

#4
Horses and camels were used for work!



#4
Work animals made farms more productive.

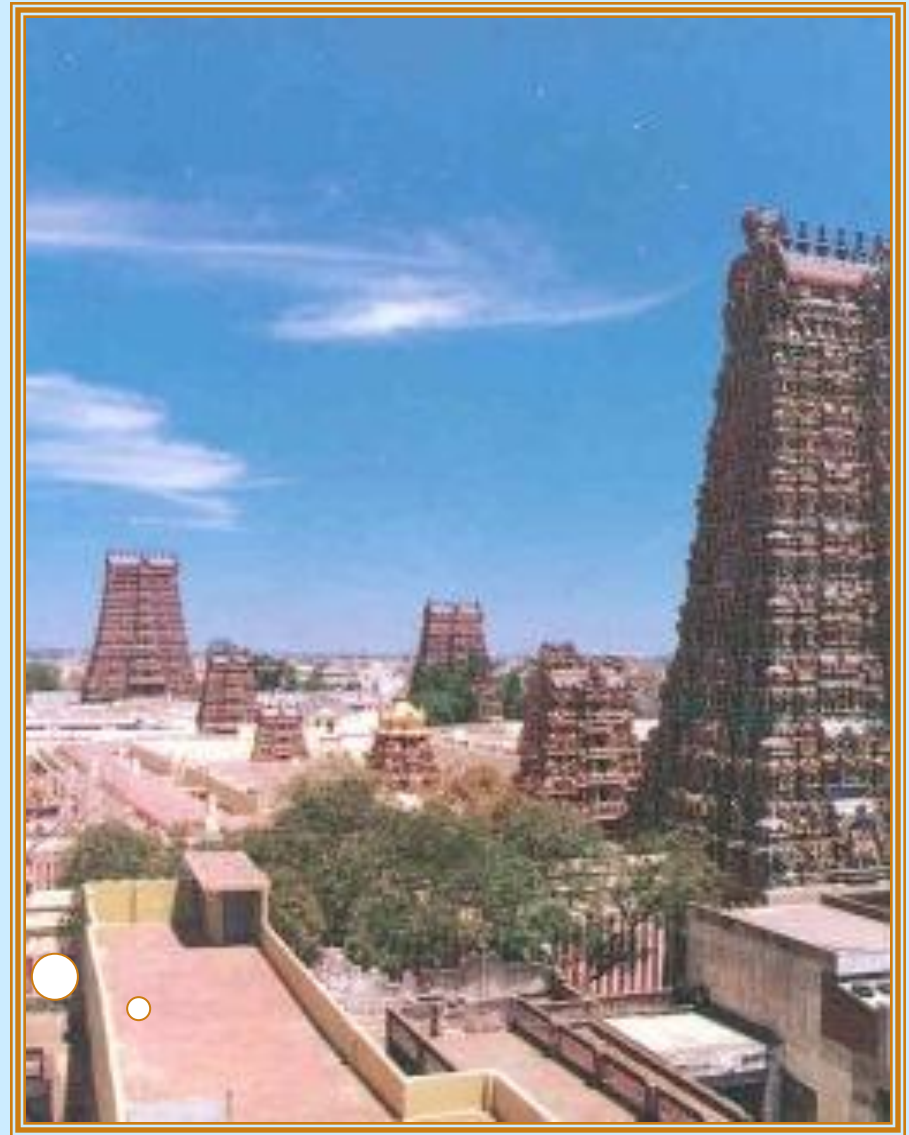


Population Growth

It was connected to the build-up of natural immunities to local infectious diseases.

#5

People now lived in denser populations!

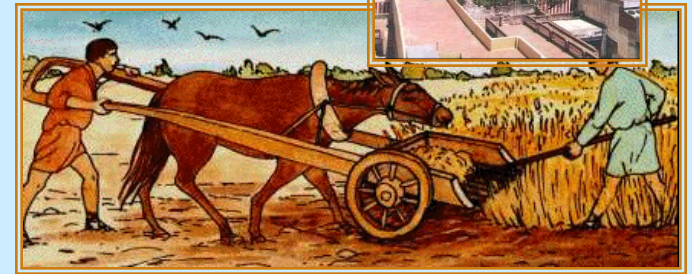




Population Growth

In Summary:

- In Afroeurasia, the invention of iron enabled farmers to clear and cultivate millions of acres never before used for farming.
- Farming and pastoral nomadism replaced hunting and gathering in some regions. People moved into previously uninhabited areas.
- Improved kinds of crops produced more food per acre.
- Horses and camels began to be used more as work animals, making farms more productive.
- People began to live closer in denser populations. This led to the build-up of natural immunities to local infectious diseases but left people vulnerable to epidemics caused by diseases new to the region.

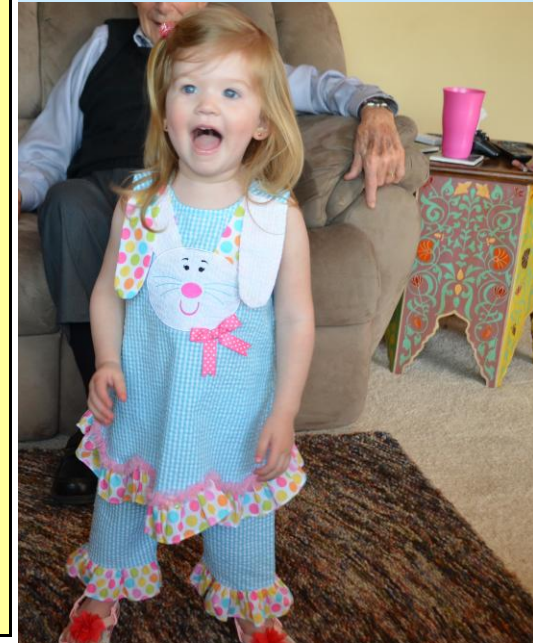
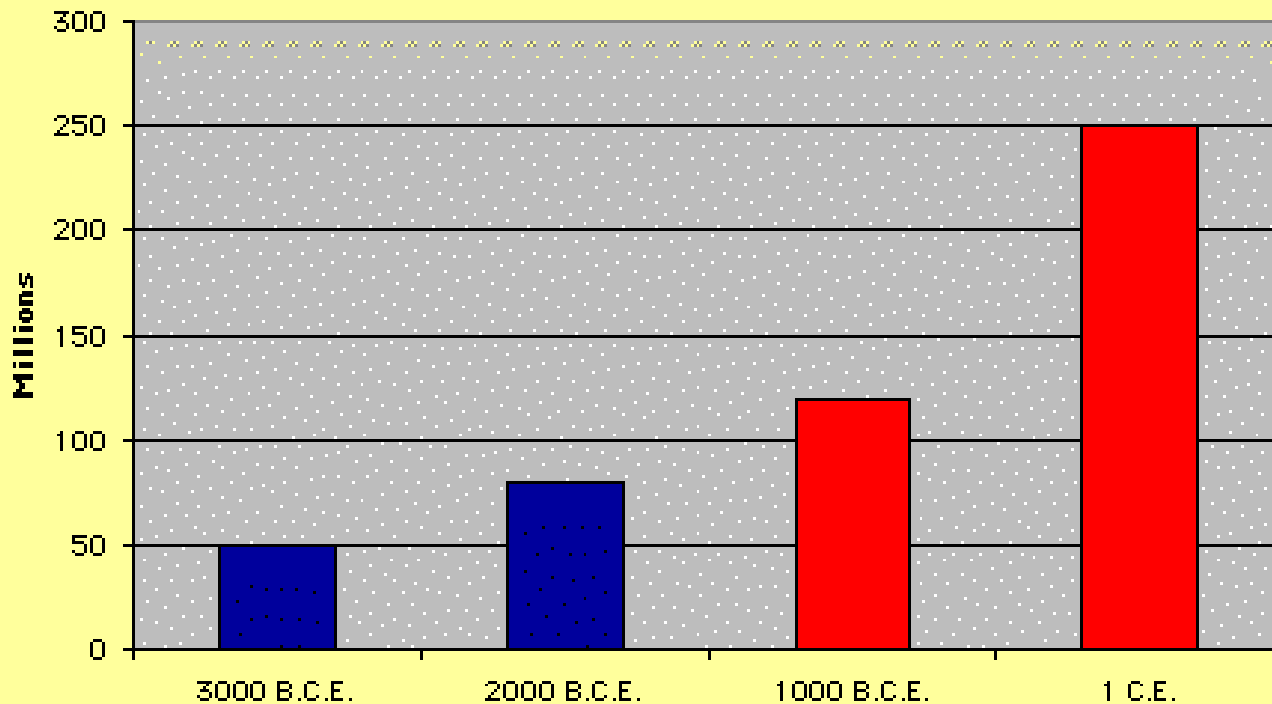




Population Growth Consequences

What were the
consequences
of population
growth?

World Population

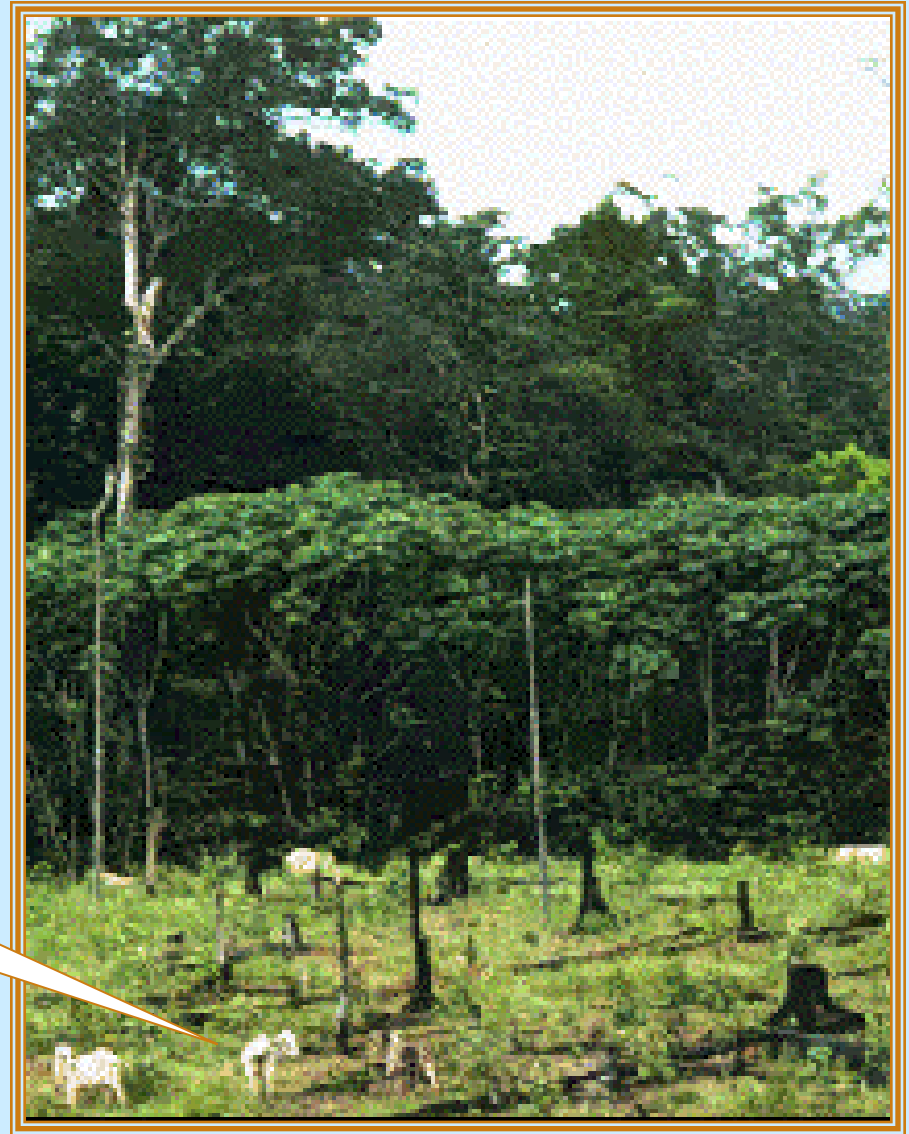




Population Growth Consequences

Over time, the clearing of forests led to soil erosion, shortages of wood for fuel, and the extinction of some local animal and plant species.

**#1
Deforestation!**

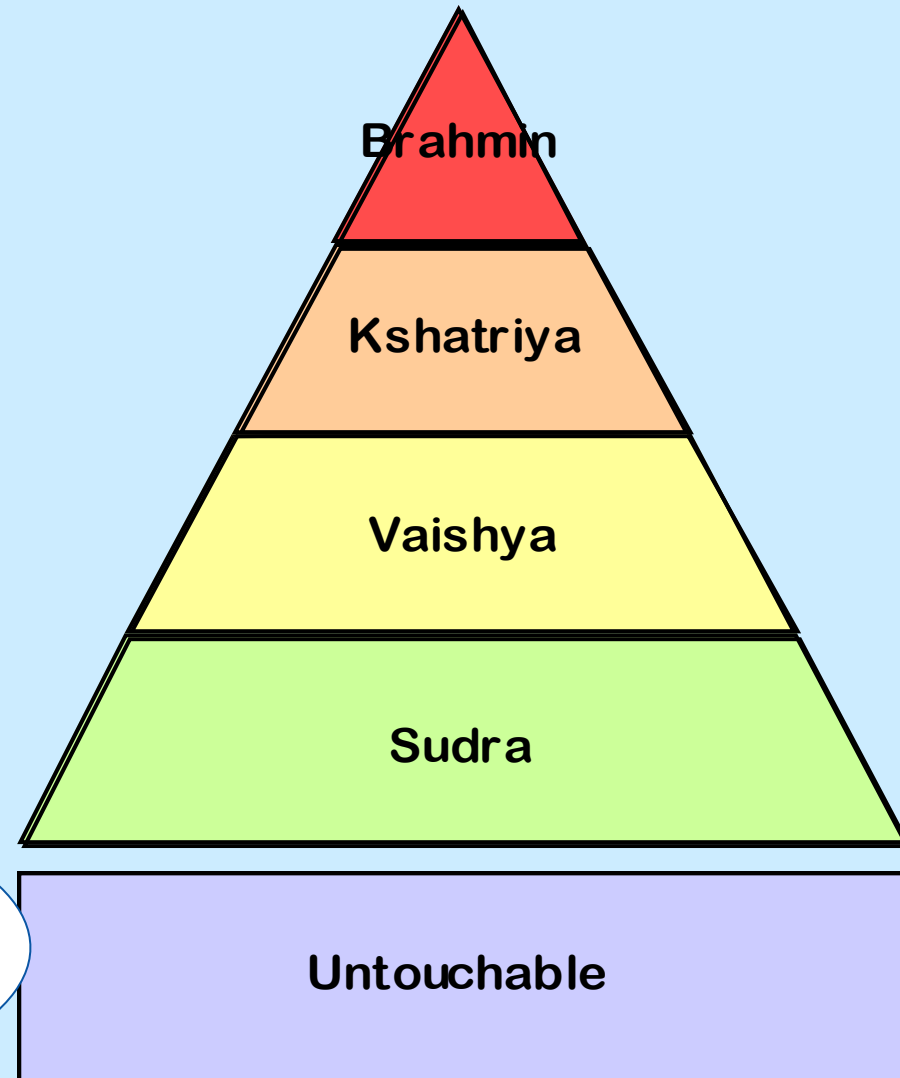




Population Growth Consequences

As populations grew and communities grew larger, more complex, and closer together, organization became more important. New political, social, and economic systems emerged.

#2
More complex societies!



The Indian Caste System



Population Growth Consequences

#3
**Collective learning
increased!**

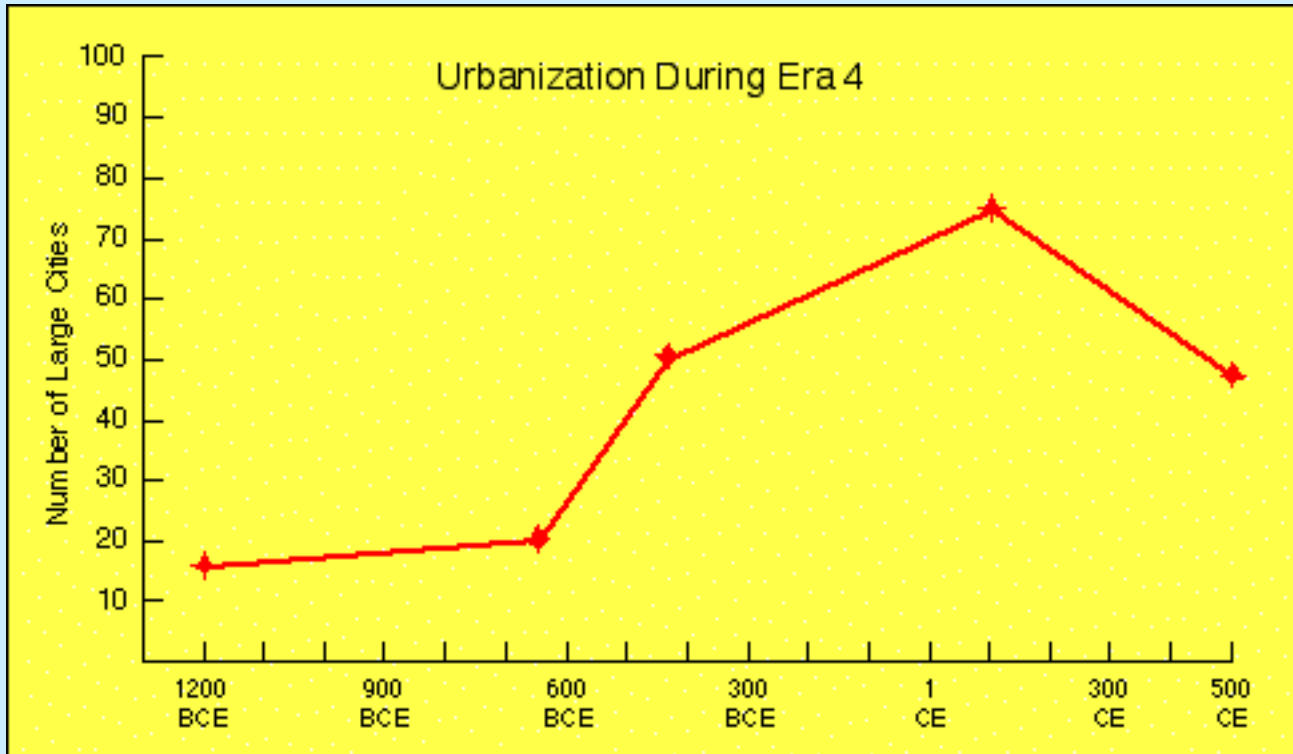




Population Growth Cities

#4

More people
began living in
large cities!

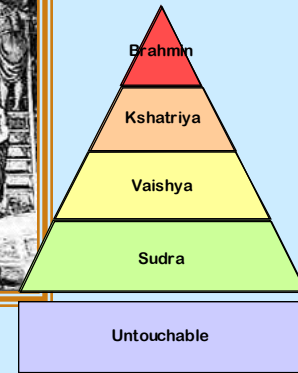
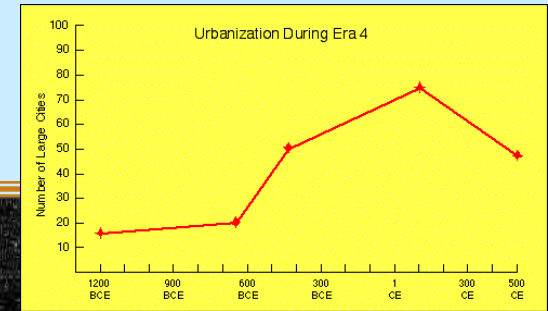
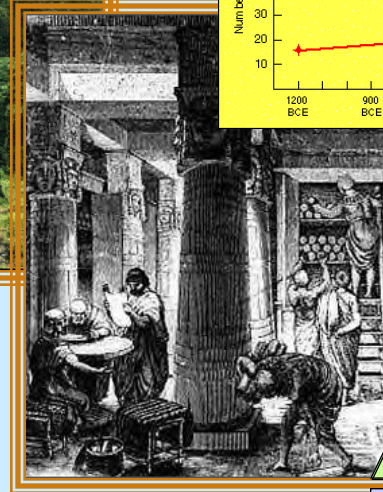




Population Growth

In Summary:

- Over time, deforestation led to soil erosion, shortages of wood for fuel, and the extinction of some local animal and plant species.
- When communities grew larger, more complex, and closer together, new political, social, and economic systems became necessary.
- Collective learning increased, further fueling advances in technology.
- Although the vast majority of people still inhabited rural farming villages, more people than ever before began living in large cities.





Expanding Networks

What is a network of exchange?

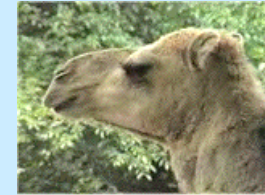
That's easy! A network of exchange is a web of connections through which people, goods, and ideas circulate. Telephones, the Internet, and highways are all networks of exchange.



Expanding Networks

Routes

Around 300 BCE to 300 CE, merchants, shippers, sea captains, and empire-builders extended and strengthened trade routes across Afroeurasia and the Americas.



Empires

Empires required networks of military and political communication. These networks encouraged interaction of many kinds over long distances.



Writing

With the appearance of alphabetic writing systems in Afroeurasia, people could communicate faster and easier than ever before.

The Phoenician Alphabet

𐤀 𐤁 𐤂 𐤃 𐤄 𐤅 𐤆
𐤇 𐤈 𐤉 𐤊 𐤋 𐤌 𐤍 𐤎
𐤏 𐤐 𐤑 𐤒 𐤓 𐤔 𐤕 𐤖

Religions

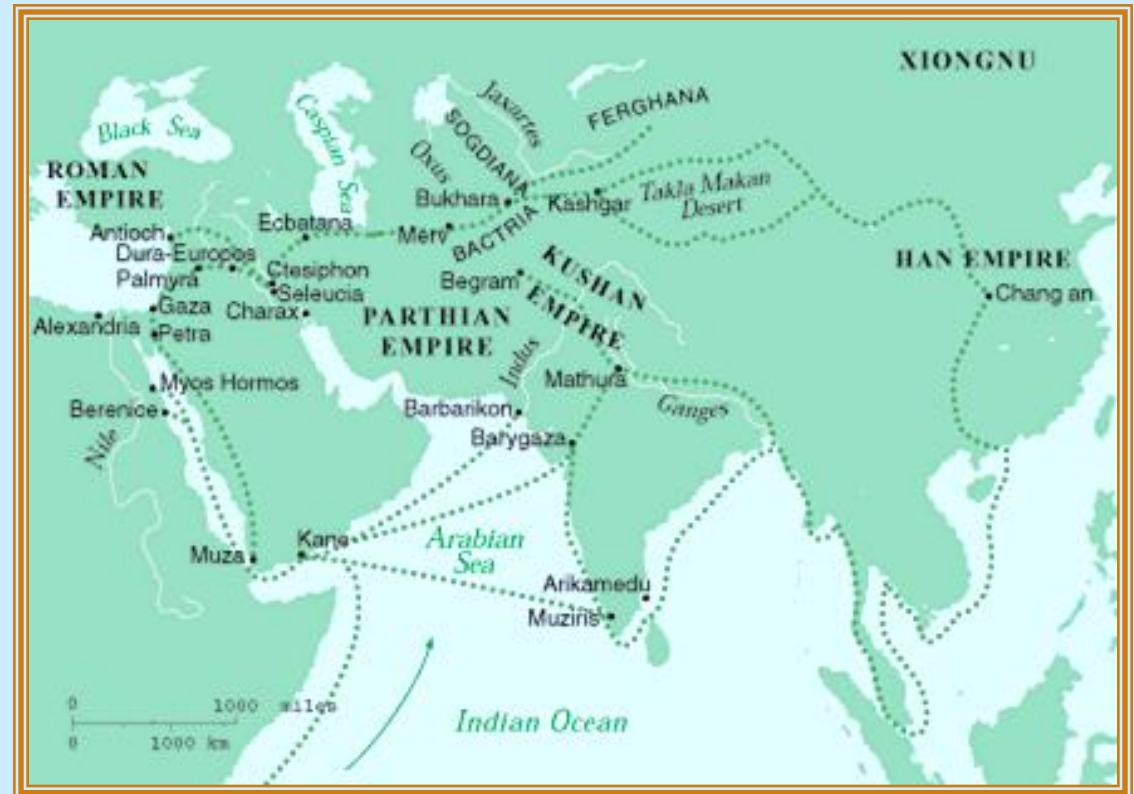
The appearance of world religions—Hinduism, Judaism, Buddhism, and Christianity—stimulated cultural interchange across political and cultural boundaries.





Expanding Networks: Routes

The silk road, Persian royal road, Roman roads, and shipping routes combined to form extensive interregional networks of exchange in Afroeurasia.



A wide variety of goods flowed along these networks...



Expanding Networks: Routes

On the map are some of the goods traded along the Afroeurasian networks.





Expanding Networks: Routes

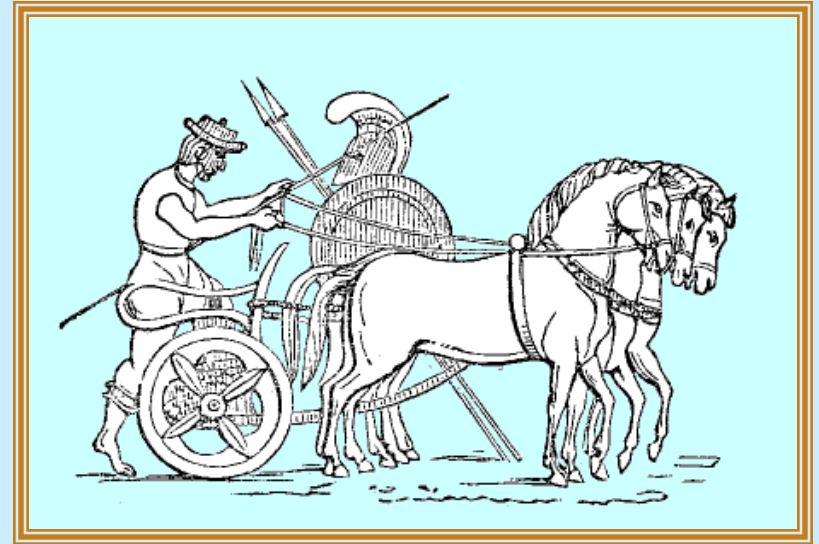
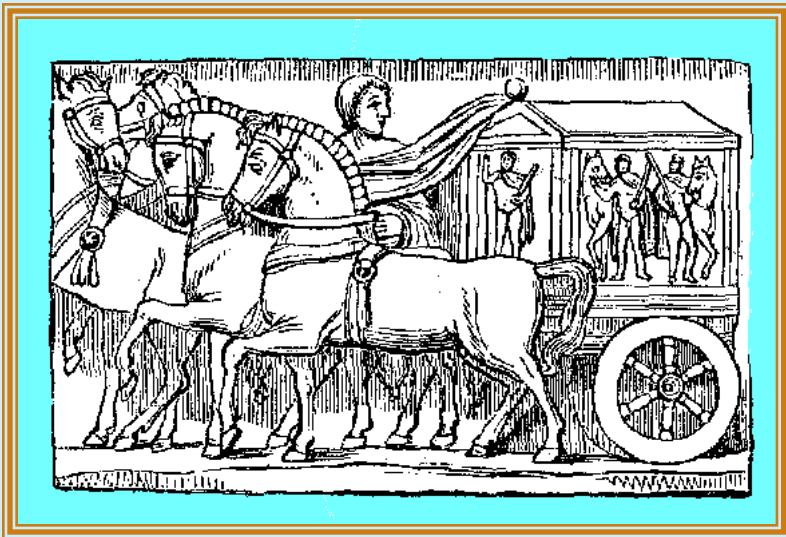
- A number of large states, or empires, appeared in Big Era Four.
- Empire-builders had to move troops and supplies, dispatch messages, gather intelligence, and collect taxes.
- These tasks required good systems of communication and transport by land and sea.
- These systems were created mainly to serve the empire's government and army.
- But they also served as highways of commerce, cultural exchange, and migration.

**An empire is a state that unites
many territories and diverse
peoples under one ruler or
government.**



Expanding Networks: Routes

Though built primarily to speed troops and supplies, Roman roads were used for commercial purposes, too. Goods were shipped to distant provinces and beyond.



Constructed by skilled engineers, the roads were strong enough to support half-ton wagons and wide enough to allow two-way traffic.

Large Empires of Afroeurasia 500 BCE - 500 CE

