

# The Ancient World

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Everything You've Ever Wanted to Know

# Group work

Draw a map of the “ancient world.”

Please take a picture and email it, along with the names of your group members, to [tozzic@rpi.edu](mailto:tozzic@rpi.edu).

# Lecture goals

- Understand the meaning of the “ancient world.”
- Identify the different peoples, languages, states and societies associated with the ancient world.
- Understand the evolution of technology, broadly defined, in the ancient world.





# Dating the ancient world

Possible start dates:

- Invention of writing (circa 3000 B.C.)
- First Greek Olympiad (776 B.C.)
- Invention of iron smelting (circa 800 B.C.)
- First large empires: Egypt (1600s B.C.), Persia (500s B.C.), China (200s B.C.)

Possible end dates:

- Fall of Rome (476 A.D.)
- Founding of Islam (632 A.D.)
- Rise of Charlemagne (742 A.D.)

# Overarching themes of the ancient world

- Settled and nomadic societies coexist
- Literacy is widespread (but limited)
- Social and political hierarchies
- Rise of major world religions (Hinduism, Buddhism, Zoroastrianism, Judaism, Christianity, Islam)

# “Ages” of early world history

- Prehistoric Age
  - Neolithic revolution
- Bronze Age
- Iron Age
- Axial Age

# Major ancient civilizations

Mesopotamia (3000-700 B.C.)

Cuneiform

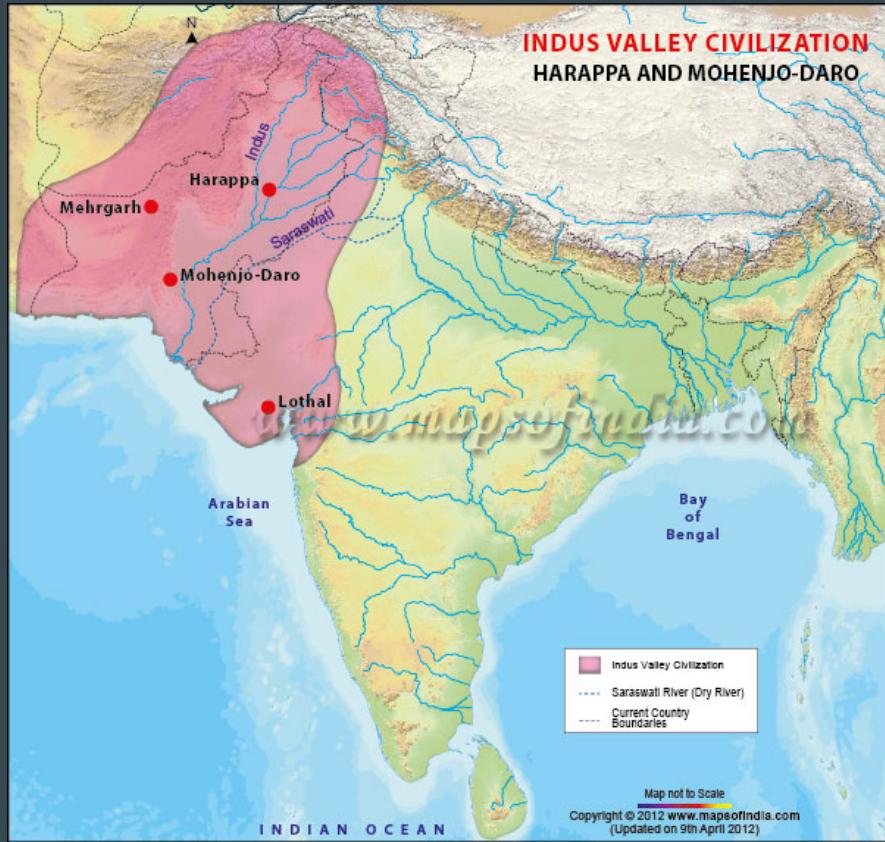


# Major ancient civilizations

Indus valley (3000-500 B.C.)

Hinduism

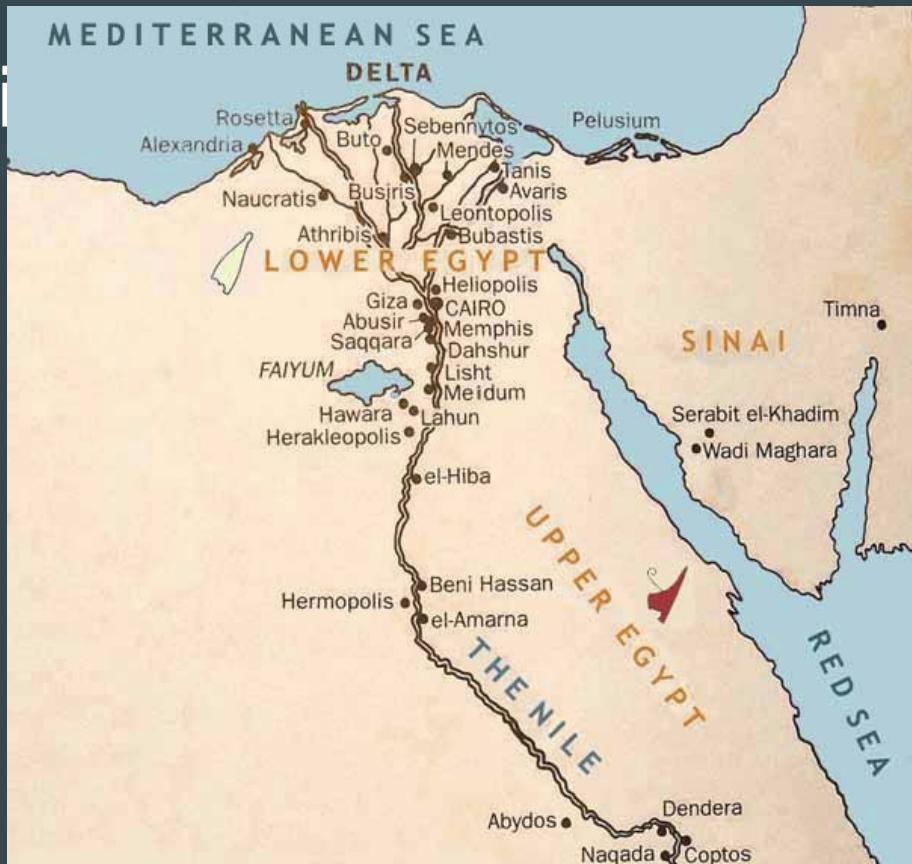
Pictographic writing



# Major ancient civilizations

Egypt (3000-100 B.C.)

Hieroglyphs



# Major ancient civilizations

Greece (800-100 B.C.)

Phoenician-derived writing system



# Major ancient civilizations

Imperial China (221 B.C. - 316 A.D.)

Logogram writing





# Ancient technological innovations

- Farming (crops and animals)
- Metallurgy
- Writing (letters and numbers)
- Mathematics
- Plumbing
- Building science
- Paper

# Development of writing

Why?

- Accounting purposes
- Social and political hierarchies → Complex record systems
  - And specialized “writing class”

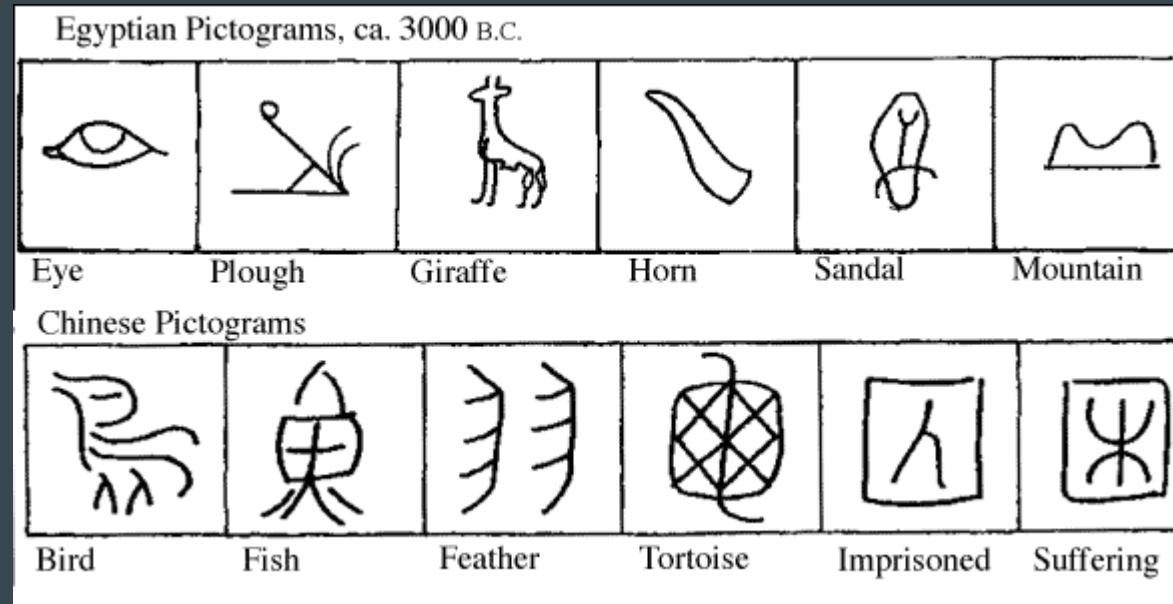
# Development of writing

Preceded by written numerical systems, starting about 40,000 B.C.



# Development of writing

- Pictograms  
(mnemonic at first, then used systematically to record information)
- Pictures of an object depict that object



	<b>Exploding bomb</b> (for explosion or reactivity hazards)		<b>Flame</b> (for fire hazards)		<b>Flame over circle</b> (for oxidizing hazards)
	<b>Gas cylinder</b> (for gases under pressure)		<b>Corrosion</b> (for corrosive damage to metals, as well as skin, eyes)		<b>Skull and Crossbones</b> (can cause death or toxicity with short exposure to small amounts)
	<b>Health hazard</b> (may cause or suspected of causing serious health effects)		<b>Exclamation mark</b> (may cause less serious health effects or damage the ozone layer*)		<b>Environment*</b> (may cause damage to the aquatic environment)
	<b>Biohazardous Infectious Materials</b> (for organisms or toxins that can cause diseases in people or animals)				

\* The GHS system is also known as the Environmental Health and Safety group. This group tried to come up with a system adopted in GHS (GHS 2010). However, eventually the environmental effects based on Inherent Safety Data Sheets (ISDS), including information about environmental hazards but based on GHS (GHS 2010).

# Development of writing

Logograms: Each symbol represents an idea

anax	anana	deer	horse	mare	stallion	ewe	ram	nanny goat	billy goat	sow	boar
cow	bull	wheat	barley	olive oil	spice	cypress	kapo	kanako	oil	wine	arepa
meri	bronze	gold	wool	horn	cloth	garment	armour	month	tree	helmet	
footstool	bathtub	spear	arrow	sword	wheeled chariot	chariot	chariot frame	wheel	dart		→

# Development of writing

Syllabary: Objects represents specific syllables

R	D	W	H	G	9	ꝝ	P	ꝑ	ꝑ	ꝑ	ꝑ	P	ꝑ
M	ꝑ	ꝑ	ꝑ	ꝑ	ꝑ	ꝑ	ꝑ	ꝑ	ꝑ	ꝑ	ꝑ	ꝑ	ꝑ
ꝑ	ꝑ	ꝑ	ꝑ	ꝑ	ꝑ	ꝑ	ꝑ	ꝑ	ꝑ	ꝑ	ꝑ	ꝑ	ꝑ
F	L	E	ꝑ	T	O	ꝑ	ꝑ	ꝑ	ꝑ	ꝑ	ꝑ	ꝑ	ꝑ
G	V	J	6	S	S	G	i	ꝑ	ꝑ	ꝑ	ꝑ	ꝑ	ꝑ
H	L	ꝑ	G	J	L	t,	ꝑ	ꝑ	ꝑ	ꝑ	ꝑ	ꝑ	ꝑ

# Development of writing

Alphabet: Symbols represent discrete sounds (phonemes)

# Writing and ancient warfare

Why does it matter?