

World History
Topic 6
Ancient Greece
2,000-300 BCE

NAME: _____

I. The Early Years of Greek Civilization

A. Ancient Greece

1. spread across coasts and islands of the Mediterranean Sea
2. interacted with older societies in Mesopotamia and Egypt
3. contributed to art, drama, philosophy, and politics
4. helped form Western civilization (Europe and Americas)
5. created the concepts of *democracy*, *geometry*, and *politics*

B. Geography

1. no country called Greece, just Greek speakers in the area
2. lay on the fringe of Europe and Asia
3. travelers and traders exchanged good, ideas, and customs
4. occupied a large peninsula
 - a. a land area surrounded by water on three sides
 - b. many other peninsulas extend from it
 - c. the Peloponnesian Peninsula juts from southern Greece
5. the mainland
 - a. area of land that is part of a continent
 - b. Greek speakers from the north settled the mainland and many islands
 - c. divided by mountain ranges
 - 1.) grazed sheep and goats
 - 2.) too steep and rocky for farming
 - 3.) divided the lowland communities
 - d. narrow valleys and small plains in between the mountains
 - 1.) less than $\frac{1}{4}$ could be used for farming
 - 2.) settled farming communities there
 - 3.) had to become fiercely independent
6. the sea
 - a. brought contact with the world
 - b. skillful sailors and merchants
 - c. fished and traded
 - 1.) Mediterranean Sea to the south
 - 2.) Aegean Sea to the east
 - 3.) Ionian Sea to the west
7. climate
 - a. mild, wet winters
 - b. hot, dry summers
 - c. too arid to grow grains
 - d. ideal for growing deep-rooted plants like olive trees and grape vines
 - e. olive oil and wine became valuable trade goods

C. Cultures That Influenced the Greeks

1. Minoans

- a. developed in Crete – an island south
- b. spread across the Aegean islands and the mainland
- c. highly advanced
 - 1.) writing system

- 2.) built huge stone palaces, like Knossos, with running water
- 3.) traded goods throughout the Mediterranean
- 4.) mysteriously destroyed (by Greeks?)

2. Mycenaean

- a. Mycena was a Greek speaking civilization influenced by Minoans
- b. each town governed by a monarchy
 - 1.) headed by a king
 - 2.) lived in stone fortresses on hilltops above the town
- c. made bronze weapons and pottery
 - 1.) traded for copper, ivory, and luxury goods
 - 2.) raided for gold
- d. grew weak and was destroyed by Dorians from the north

3. the dark age

- a. people lost the ability to read and write
- b. migrated across the Aegean
- c. settled island and the west coast of Anatolia, or Ionia
 - 1.) different waves of immigrants brought different culture
 - 2.) told stories and sang about the “heroic age” of Mycena

D. The Trojan War

1. the story

- a. Mycenaean warriors sailed across the Aegean
- b. attacked Troy in Anatolia (Asia Minor, now Turkey)
- c. lasted ten years
- d. Greeks tricked the Trojans into accepted a large wooden horse as a gift
- e. once in the city, hiding Greeks crept out and opened the city gates
- f. the Greek army entered and burned Troy to the ground

2. the *Iliad*

- a. recited or sung for years
- b. then developed an alphabet
- c. Homer wrote this long epic poem to tell the story
- d. tells of events during the war
- e. stops before the **eventual** victory – final

3. the *Odyssey*

- a. another epic poem written by Homer
- b. describes the adventures of Odysseus on his journey home from the war
- c. imagined Mycenaean warriors as fearless

4. taught the Greek values of bravery, strength, and honor

E. Emergence of City-States

1. **polis**

- a. city-state
- b. mostly along the coast
- c. cut off from one another by mountains and water
- d. established own commerce, government, and culture
- e. seas allowed trade

2. community with its own government

- a. also ruled surrounding villages and countryside
- b. had a marketplace and government center
- c. **citizens**
 - 1.) members of the city-state who had legal rights
 - 2.) made laws and discussed issues
- d. area and population were small

3. **acropolis**

- a. high city

- b. stood on a high hill
- c. public buildings and marble temples
- d. served as a fortress in times of danger
- e. below lay homes, shops, farms, and the agora (marketplace)

4. **politics**

- a. the art and practice of government
- b. came from the word *polis*
- c. each had a different kind of government
- d. **aristocracy** – a hereditary class of rulers (ruled by the best)
- e. citizens began governing themselves (very unique)
- f. women, slaves, and foreigners were **excluded** – shut out, kept from participating
- g. three kinds of inhabitants
 - 1.) citizens (could vote)
 - 2.) women and free foreigners (couldn't vote)
 - 3.) slaves (few rights at all)

5. “The Framework for Greek Life”

- a. proud of and loyal to their polis
- b. a good citizen is willing to sacrifice for their city (even die)

II. Democracy in Athens

A. Struggle in Athens

1. Isagorus, a judge, tried to crush a movement for democracy
2. invited warriors from the city-state of Sparta
3. forced the leader Cleisthenes to flee
4. exiled 700 families
5. Athenians fought back and won

B. Experimenting with Forms of Government

1. **oligarchy**

- a. political power is held by a small group (aristocrats)
- b. headed by a council
- c. Draco

- 1.) created harsh punishments for all offenses
- 2.) *draconian* – laws that are too harsh or severe

2. military tactic changes

- a. battles used to depend on fights between aristocratic warriors
- b. introduced the **phalanx**
 - 1.) a formation of heavily armed foot soldiers who moved together as a unit
 - 2.) lined up to form a row of overlapping shields before battle
 - 3.) each man's shield protected his neighbor
 - 4.) held a spear or sword in the right hand
- c. foot soldiers
 - 1.) no need to buy a horse or **maintain** it – to keep and support
 - 2.) could instead afford weapons and armor
 - 3.) gained political power as they grew more important

3. **tyrannies**

- a. government run by a stronger leader
- b. tyrants were aristocrats
- c. promised land and benefits to the poor to gain support
- d. took over and often governed fairly and improved life
- e. some ruled harshly and didn't fulfill promises

C. The World's First Democracy

1. **democracy**

- a. rule by the people
- b. large numbers of men started to participate in civil affairs

2. Solon

- a. chosen to lead Athens
- b. ended slavery for debtors
- c. gave non-aristocrats the right to vote

3. Cleisthenes

- a. reduced the power of the rich
- b. brought in voters from the lower class
- c. gave the assembly more power
 - 1.) all male voters
 - 2.) met to discuss issues and make decisions

4. citizen juries

- a. group of people who hear evidence and decide a court case
- b. put legal decisions in the people's hands

5. Pericles

- a. paid citizens for jury service and civic duties
- b. helped poor people take part

6. **citizenship**

- a. membership in a community
- b. ordinary people helped make decisions
- c. not subjects who had to obey their ruler

7. education

- a. produced well-rounded citizens
- b. girls learned to read and write
- c. boys
 - 1.) attended school from age seven
 - 2.) studied literature, physical education, and music
- d. higher education
 - 1.) **lecturer** – taught students subjects
 - 2.) mathematics and public speaking

D. Athenian Democracy

1. the assembly

- a. main political body
- b. all free adult male citizens could attend
- c. met 40 times a year
- d. all had the right to speak

2. the boule

- a. 500-person council
- b. chosen at random
- c. decided which issues to bring before the assembly

3. the courts

- a. many different courts to decide different types of cases
- b. citizen juries
 - 1.) several hundred or thousand citizens
 - 2.) decided by a majority vote
 - 3.) laws discouraged bribery

4. Areopagus

- a. a council of advisers who decided some cases
- b. eventually only judged murder cases

5. limitations

- a. women could not vote or hold office
- b. foreigners were not citizens
- c. slaves had no rights

6. **direct democracy**

- a. a political system in which citizens participate directly in decision making
- b. populations were small and were committed and hard working
- c. wouldn't work in big nations

7. **representative democracy**

- a. citizens elect others to represent them
- b. representatives make decisions and pass laws on their behalf

8. both are rule" for the people" by the people"

III. Oligarchy in Sparta

A. Spartan Life

1. life was simple
2. boys taken by the state at age seven
3. trained and served in the army for 20 years
4. girls were raised to bear strong children

B. The Spartan State

1. like an army camp, both feared and admired
2. mix of monarchy, oligarchy, and democracy
3. government
 - a. inland city-state on the Peloponnesian Peninsula
 - b. ruled by two kings
 - 1.) military leaders
 - 2.) headed the council of elders
 - 3.) 28 men over the age of 60
 - c. democratic assembly
 - 1.) free adult males
 - 2.) 9,000 citizens (versus Athens's 45,000)
 - 3.) far less power
 - 4.) passed laws but the council had to approve
 - 5.) elected the five **ephors**
 - a.) responsible for the day-to-day operation of government
 - b.) made sure the kings and council acted within the limits of the law
 - c.) could remove a king if he broke the law
4. military conquests
 - a. didn't have resources and trade from the sea
 - b. conquered Messenia and enslaved the people
 - c. **helot**
 - 1.) slaves that belonged to the polis, not individuals
 - 2.) farmed the land and turned over half the crop
 - 3.) treated harshly
 - 4.) supported all Spartans so they could train as warriors
5. the Helot revolts
 - a. outnumbered the Spartans
 - b. lost the revolt but posed a threat
 - c. so Sparta became an even stronger **military state** – a society organized for the purpose of waging war
 - d. ephors declared war on the helots yearly to scare them
 - e. secret police watched the helots

C. Military Training in Sparta

1. Spartan – highly disciplined or lacking in comfort
2. did not value luxury or beautiful buildings
3. education
 - a. helots worked the fields
 - b. men trained for the military
 - 1.) started at age seven
 - 2.) lived in **barracks** – military housing
 - 3.) exercised, hunted, and trained
 - 4.) were only taught to
 - a.) obey orders and **authority** – people in power
 - b.) endure hardship
 - c.) win or die in battle

- 5.) began a two-year military program at age 18 and could marry
 - 6.) left army at age 30 but still spent most time with other men
4. social classes
- a. men had to gain entry to a men's club of soldiers to be "equals"
 - 1.) had full citizenship rights
 - 2.) were members of the assembly
 - 3.) had the right to a piece of land worked by helots
 - 4.) became a candidate for the council of elders at age 60
 - b. if not, they became "inferiors" who were outcasts
5. women
- a. raised to be strong and vigorous
 - b. participated in sports
 - c. had healthy babies who would grow into soldiers
 - d. many freedoms and responsibilities
 - e. husbands spent most of their lives at military camp
 - f. valued because they raised future soldiers for the state
6. Sparta versus Athens
- a. Spartans
 - 1.) powerful army and stable government
 - 2.) feared individual differences and change
 - 3.) valued those who fit in, not those who stood out
 - 4.) the oligarchy and society changed little
 - 5.) relied on conquest and slave labor for food
 - b. Athenians
 - 1.) valued individual expression and new ideas
 - 2.) democracy evolved over time
 - 3.) addicted to **innovation** – new ways of doing things
 - 4.) had a lot of silver to trade for food
 - c. created tensions
 - d. Pericles used these differences to raise moral when Athens fought Sparta

IV. Ancient Greek Society and Economic Expansion

A. Alike but Different

1. all spoke the same language and worshiped the same gods
2. different governments, economies, and societies

B. The Role of Women

1. had much freedom in Sparta
2. few rights in Athens
3. family life
 - a. husband, wife, and children
 - b. men were head of the family and had the control
 - c. poor women worked outdoors on farms or sold goods at market
 - d. rich women stayed home
 - 1.) supervised the household
 - 2.) raised children
 - 3.) kept track of finances
 - 4.) managed slaves
 - 5.) made family's clothing
 - a.) spun wool or flax into yarn
 - b.) wove fabric
 - c.) sewed or knitted into clothes
 - 6.) supervised preparation of meals
 - e. played public roles in religious ceremonies
4. Spartan women
 - a. could sell property
 - b. well educated
 - c. trained in sports
 - d. shocked other Greeks

C. Social Divisions

1. complex class system
 - a. rich landowners
 - b. small landowners
 - c. merchants and artisans
 - d. landless poor
 - e. slaves
2. aristocracy
 - a. claimed descent from kings or gods
 - b. had the right to hold public power
 - c. owned large plots of land and raised crops and livestock
 - d. slaves did the work
3. citizens
 - a. adult males
 - b. had the right to vote
 - c. large farmers (very few)
 - d. small farmers (no land for livestock or a surplus)
 - e. *thetes* or **tenant farmers** – paid rent, either in money or crops, to grow crops on another person's land
4. noncitizens
 - a. limited rights
 - b. **metic** – resident aliens
 - c. a Greek from another city-state or someone who was not Greek
 - d. many merchants and artisans
5. **slavery**
 - a. the ownership and control of other people as property

- b. enslaved in various ways
 - 1.) prisoners of war
 - 2.) bought from slave traders or sold into slavery by their family
 - 3.) abandoned by parents
- c. foreign and domestic
- d. widespread and 1/3 of the population
- e. many jobs
 - 1.) cooked, cleaned, and cared for children
 - 2.) teachers
 - 3.) worked on farms, ships, and in mines
 - 4.) helped Greek economy grow
- f. treatment
 - 1.) some were treated kindly and sometimes freed
 - 2.) had no legal rights
 - 3.) some were punished harshly by owners
 - 4.) sometimes worked to death

D. The Greek Economy

- 1. conquest
 - a. limited farmland and resources for the growing population
 - b. **obtained** – gained, more land and resources
 - c. example: Sparta conquered Messenia to raise crops
 - d. allowed Sparta to form a professional army
- 2. colonization
 - a. migrated – moved to new areas
 - b. faced danger, uncertainty, and challenges
 - c. the coast was ideal
 - 1.) anchor ships
 - 2.) set up a port for trade
 - d. needed good land
 - 1.) farming
 - 2.) resources such as timber or minerals to export
 - e. ties to the old city-state
 - 1.) brought a flame to **symbolize** – represent
 - 2.) traded with the home city but never returned there
 - f. 500 colonies
 - 1.) around the Mediterranean Sea and Black Sea
 - 2.) stretched from Russia to Spain
- 3. currency
 - a. made by kings of Lydia
 - b. gold and silver coins
 - c. standard size and value
 - d. replaced trading goods for goods
 - e. made trade easier
 - f. set up mints – places where coins are made
 - g. stamped with symbols of each city-state (Athens – owl for the goddess)
- 4. trade in Athens
 - a. traded silver, pottery, jewelry, olive oil, and wine
 - b. for grain, timber, minerals, ivory, glass, and perfume
- 5. expansion
 - a. spread culture, goods, customs, and ideas
 - b. Greek alphabet from Phoenician alphabet
 - c. stories of Egyptian gods and goddesses mingled with Greek mythology

V. Warfare in Ancient Greece

A. Warfare Was Common

1. city-states fought over land and resources
2. also fought three major wars
3. united twice long enough to defeat the Persian empire

B. The Persian Wars

1. Persia conquered Ionia
 - a. Ionians were used to governing themselves
 - b. rebelled
 - c. Athenian soldiers helped by burning the Persian city of Sardis
 - d. enraged Darius, the Persian king
 - e. he recaptured Ionia and set out to conquer all of Greece
2. Persian war and conquest
 - a. established a vast empire after defeating Babylon
 - b. controlled Anatolia to India
 - c. greatest empire of its time
 - d. yet had trouble beating the Greeks
3. **Battle of Marathon**
 - a. Greek victory over the Persian army that ended the First Persian War
 - b. 20,000 Persian soldiers sailed to the plain of Marathon near Athens
 - c. Athenian soldiers rushed there but were outnumbered two to one
 - d. and they didn't have archers or horses like the Persians
 - e. Greek phalanxes took them by surprise
 - f. the surprise Greek victory ended the First Persian War
 - g. a messenger died after running 26 miles to Athens to share the news
 - h. now a marathon is a challenging footrace
4. Second Persian War
 - a. Darius died but his son, Xerxes, took over
 - b. assembled 100,000 soldiers including Egyptians
 - c. had no navy but used Phoenician ships
 - d. Spartan King Leonidas stopped them at Thermopylae, a mountain pass
 - e. a Greek traitor led them on another path through the mountains
 - f. the Spartans died as they were attacked from both sides
5. victory for Athens
 - a. Persians headed for Athens
 - b. Themistocles told the people to flee to islands
 - c. Xerxes burned Athens
 - d. his ships **pursued** – chased, the Greek navy
 - e. watched the naval battle in the Strait of Salamis from a throne on a hill
 - f. Themistocles had hidden his ships and then rammed the Persian ships
 - g. Persians lost 200 ships and Athens only 40
 - h. **Battle of Salamis** – Greek victory over the Persian navy during the Second Persian War

C. Athens and Sparta Were Rivals

1. golden age
 - a. Pericles rebuilt Athens
 - b. much art, learning, wealth, and power
 - c. trouble was brewing with the two rivals
 - 1.) Athens had the strongest navy
 - 2.) Sparta had the strongest army
 - 3.) both wanted to be the supreme power
2. **Delian League**
 - a. a military alliance led by Athens

- b. **allies** – members of an alliance
- c. met on the island of Delos
- d. promised to defend one another with ships or money
- e. kept money in a treasury on Delos
- f. 150 members
- g. Athens dominated the league
 - 1.) protected its traders, travelers, and grain
 - 2.) brought some into the league by force
 - 3.) Naxos tried to leave and was attacked and forced to stay
 - 4.) collected money to build their own ships
 - 5.) forced others to use their currency
 - 6.) moved treasury to Athens
 - a.) used its funds to rebuild Athens
 - b.) helped construct the Parthenon – temple to Athena on the Acropolis

3. Peloponnesian League

- a. military alliance led by Sparta
- b. on the Peloponnesian Peninsula
- c. oligarchies instead of democracies like Athens
- d. Athens banned trade with Megara, a Spartan ally
- e. both sides prepared for war

D. The Peloponnesian War

- 1. lasted on and off for 27 years
- 2. Sparta's siege of Athens
 - a. Sparta's army marched into Athens
 - b. Pericles told farmers to hide inside the city walls for safety
 - c. Spartans led a siege to cut off food and supplies
 - d. Athenians had built two long walls along the road to the port city
 - e. held out for more than a year
 - f. a plague, or contagious disease, broke out in the crowded city
 - g. agreed to a truce
- 3. Athens surrendered
 - a. Athens broke the truce and invaded Sicily
 - b. lost a large part of its navy at Syracuse
 - c. Persians gave money to Sparta to build a navy
 - d. Sparta defeated the Athenian navy at the Battle of Aegospotami
 - e. then attacked Athens and used the navy to cut off food supplies at sea
 - f. Athens surrendered
- 4. peace terms
 - a. Athens had to give up their democracy
 - b. hurt all city-states
 - c. ended the golden age of Greece

VI. Ancient Greek Beliefs and Arts

A. Greek Tales

1. a proud girl named Arachne said she could weave better than Athena
2. created a tapestry that mocked the gods
3. Athena changed her into a spider to weave webs forever
4. warned people against being too proud

B. Greek Religion and Mythology

1. **polytheism**

- a. the worship of many gods, or deities
- b. deity – being with supernatural powers
- c. looked and behaved like humans (unlike Egyptian gods)

2. Greek **mythology**

- a. the collection of myths and stories about gods and heroes
 - 1.) explained the changing of the seasons
 - 2.) revealed why suffering exists
 - 3.) explained human behavior
 - 4.) taught moral lessons
 - 5.) described entertaining adventures
- b. included heroes like Hercules who had amazing strength
- c. the *Odyssey* tells of Odysseus's ten year trip back to Ithaca

3. Greek gods and goddesses

a. Zeus

- 1.) supreme ruler of the gods, lord of the sky, god of the rain
- 2.) lived on Mount Olympus
- 3.) threw thunderbolts

b. Hera – his wife, protected married women and households

c. Poseidon – god of the sea

d. Hades – ruled the underworld, inhabited by the souls of the dead

e. Apollo – god of the arts, prophecy, and healing

f. Ares – god of war

g. Aphrodite – goddess of love and beauty

h. Artemis – goddess of hunting and childbirth

i. Athena

- 1.) gave the Greeks the gift of the olive tree
- 2.) guardian of the city of Athens and very popular

j. acted like humans

- 1.) fell in love, got married, and had children
- 2.) celebrated and played tricks
- 3.) felt jealousy and rage

4. religion's role

- a. public and private rituals
- b. began meetings with prayer and animal sacrifices
- c. shrines in homes and temples in cities
- d. made sacrifices at temples on holy days for favors from the gods

5. **Olympic games**

- a. an athletic competition held every four years in honor of Zeus
- b. displayed skills at religious festivities to honor the gods
- c. boxing, wrestling, and running
- d. **ceased** – stopped, all conflicts between city-states
- e. Olympia crowded with merchants, food sellers, and artisans
- f. winner rewarded with privileges and fame

6. sacred sites

- a. groves of trees, springs, etc.

b. Mount Olympus – in norther Greece, home to major gods

c. Delphi

1.) on slopes of Mount Parnassus

2.) contained many shrines

3.) holy temple of Apollo

a.) housed Apollo's priestess, the Delphic oracle

b.) oracle – someone who predicts the future

C. Arts in Ancient Greece

1. appreciated beauty

2. painting and sculpture

a. realistic with depth and perspective

b. Egyptian influence

c. calm and peaceful humans and deities

d. decorated shrines, temples, and gravestones

3. architecture

a. inspired by proportions of the human body

b. aimed for perfection, balance, and harmony

c. the Parthenon (finest example)

1.) built by Ictinus, Callicrates, and Phidias to honor Athena

2.) columns, bands of sculpture, and a giant statue of Athena

d. painted marble

1.) statues would have looked real

2.) now white

D. Greek Literature

1. religious

a. held poetry contests at festivals

b. wrote plays based on myths

c. the *Iliad* and *Odyssey* showed gods controlled human life

2. **lyric poetry**

a. poetic songs, performed by singers playing a lyre

b. Pindar praised victorious athletes

c. Alcaeus wrote about politics and war

d. Sappho wrote about human emotions

3. drama

a. a play or performance on stage

b. *drama*, *theater*, *tragedy*, *comedy* and *scene* come from Greek

c. performed to honor the god Dionysus

d. actors performed character roles

e. **chorus** – commented on the action and advised characters

f. plays at festivals were award prizes

g. tragedy

1.) traced the downfall of a hero caught in violent conflict

2.) taught **submission** – obedience, to the gods

2.) *Anigone* by Sophocles, and Aeschylus and Euripides

h. comedies

1.) ended happily

2.) current events about culture, society, and politicians

3.) Aristophanes

4. Aesop's fables

a. a story, with animals as characters, that teaches a moral lesson

b. Aesop was a slave on the island of Samos

c. was freed for learning and traveled, telling his fables

d. tortoise and the hare – slow and steady wins the race

VII. Ancient Greek Learning

A. Value of Learning

1. honored scholars, scientists, and great thinkers
2. scientific findings laid the foundation for future discoveries
3. philosophers – thinkers who explored knowledge

B. Greek Philosophy

1. philosophy means “love of wisdom”
2. importance of **reason**
 - a. the power to think clearly
 - 1.) nature of the universe
 - 2.) a good life
 - 3.) what is real
 - 4.) what is true
 - b. developed logic
 - 1.) system of reasoning
 - 2.) involves a step-by-step method to solve problems or answer questions

3. Socrates

- a. son of a stonemason and midwife
- b. wandered Athens sparking discussions with others (annoying)
- c. challenged beliefs and was sentenced to death
- d. **Socratic method** – form of teaching in which the teacher asks students question after question to force them to think more clearly

4. Plato

- a. Socrates’s student
- b. recorded his ideas in dialogues
- c. the **Academy** – school of philosophy founded by Plato
- d. now means a school of higher learning
- e. interested in the nature of reality

5. Stoics

- a. Hellenistic period
- b. founded by Zeno
- c. divine reason governed the universe
 - 1.) should live in harmony with nature
 - 2.) tried to master their emotions through self-control

C. History and Politics Shape Greece

1. historians studied the past and asked WHY
2. Herodotus
 - a. writer called “the father of history”
 - b. lived during the Second Persian War
 - c. wrote *The Histories* to investigate the causes of the conflict
3. Thucydides
 - a. lived during the Peloponnesian War
 - b. wrote about the war by visiting the battle sites and interviewing people
 - c. wanted to avoid repeating mistakes
- 4 Xenophon
 - a. traveled Persia and Greece
 - b. wrote the first autobiography
 - c. believed history could teach people to live morally
5. Plato
 - a. wrote *The Republic* to present his ideas about an ideal government
 - b. wanted to be led by philosopher-kings who would be wise
 - c. wouldn’t be elected by the people

6. Aristotle
 - a. wrote *Politics* to compare governments
 - b. said the best government would be balanced
 - c. felt citizens must participate in government to be happy
7. Demosthenes
 - a. orator – gifted public speaker
 - b. Athenian statesman who overcame a stammer

D. Science and Technology

1. believed gods and spirits were behind natural events, illness, etc.
2. began observing nature and formed a **hypothesis** – a logical guess, to explain
3. began identifying and explaining laws of nature
4. Thales of Miletus
 - a. How big is Earth, what is its shape, and what holds it up in space?
 - b. thought everything was made of water
 - c. thought Earth was a disk floating on water
5. Democritus realized the universe was made up of atoms
6. Aristotle
 - a. studied at Plato's academy
 - b. set up his own school, Lyceum
 - c. observed plants, animals, and rocks and collected data
 - d. studied math and logic
 - e. analyzed government and the arts
7. technology
 - a. invented water clocks, watermills, and locks
 - b. steam power to operate mechanical statues, gadgets, and toys
 - c. Archimedes created a weapon that used mirrors to redirect the sun and set fire to enemy ships (a laser)

E. Mathematics and Medicine

1. mathematics
 - a. discovered basic **concepts** – ideas
 - b. Pythagoras of Samos
 - 1.) thought numbers were the key to understanding the universe
 - 2.) “square numbers”
 - 3.) Pythagorean theorem – a statement that can be proved true
 - c. Hypatia – daughter of Theon of Alexandria (mathematician)
 - d. Euclid
 - 1.) the “father of geometry” taught in Alexandria, Egypt
 - 2.) compiled *The Elements* – a geometry textbook
2. medicine
 - a. looked for natural causes of illness (not gods)
 - b. practiced surgery and dentistry
 - c. Hippocrates
 - 1.) best-known Greek doctor
 - 2.) wrote books and ran a school to train doctors
 - 3.) taught doctors to ask questions and make observations
 - 4.) **Hippocratic oath** – oath taken by medical students swearing to practice medicine in an ethical way
 - d. Alexandria, Egypt
 - 1.) Herophilus and Erasistratus dissected the human body
 - 2.) studied human anatomy
 - a.) the optic nerve linked the eye to the brain
 - b.) the brain is the center of thought
 - c.) the pulse sends blood through the arteries

VIII. Alexander and the Hellenistic World

A. Alexander the Great

1. 12-year-old prince of Macedonia
2. watched his father, King Philip II, barter over an angry, unruly black stallion
3. the king decided it could not be tamed, but Alexander grabbed the reins
4. he knew it was afraid of its own shadow and faced it towards the sun
5. named him Bucephalus, who never allowed anyone else to ride him
6. the two eventually set out to conquer the world

B. Macedonia's Rise

1. land north in the Greek peninsula
2. governed by kings, and considered old-fashioned by others
3. King Philip
 - a. regained independence from Persia after their defeat by the Greeks
 - b. brilliant and ambitious leader
 - c. his brother, the king, had died and his son was an infant
 - d. built a powerful army with new tactics
 - 1.) organized phalanxes
 - 2.) armed each man with a **sarissa**
 - a.) an 18-foot-long Macedonian pike or spear
 - b.) longer than the Greeks and gave them huge advantage
 - 3.) trained men to change direction without losing formation
 - e. defeated the Illyrians
 - f. conquered Greece
 - 1.) with his son, Alexander, who led the cavalry
 - 2.) beat Thebes and Athens
 - 3.) said city-states could keep their governments
 - 4.) wanted to conquer Persia next
 - g. was then assassinated at his daughter's wedding

C. Alexander on the March

1. gained the throne at age 20
2. brilliant military leader influenced by Aristotle
3. the *Iliad* was his favorite book and he wanted to be like Achilles
4. led his armies through Persia, central Asia, and Europe
5. led his soldiers into battle personally to lift morale
6. spread Greek culture along the way
7. conquered Greece
 - a. crushed revolts after his father's death
 - b. burned Thebes to the ground as a warning
8. took 30,000 infantry and 5,500 cavalry into Asia next
 - a. freed Ionia from Persian rule
 - b. captured cities along the Mediterranean coast
9. liberated Egypt from Persians and founded Alexandria on the Nile delta
10. headed to Persia and defeated the king
11. led his army to Afghanistan and India
12. became known as "Alexander the Great" in 11 short years of conquest
13. **Hellenistic** period
 - a. Greek-like (Hellenes is the Greeks' word for themselves)
 - b. founded Greek-style cities everywhere
 - c. Greek soldiers, traders, and artisans settled in
 - d. built Greek temples and statues
 - e. shared Greek ideas and customs
 - f. Greek culture mixed with Egyptian, Persian, and Indian cultures
 - 1.) Egyptian goddess Isis is now in Greek mythology

14. the fall

- a. Bucephalus died of battle wounds after a battle in Pakistan
- b. Alexander's army mutinied
- c. he died of a fever in Babylon at the age of 32
- d. his infant son couldn't take over
- e. generals divided up the empire into kingdoms
- f. Ptolemy
 - 1.) ruled a kingdom in Egypt
 - 2.) his family ruled for 300 years
 - 3.) Cleopatra was the last

15. this **period** – span of time, was short lived but changed the world forever

D. The Impact of Hellenistic Learning

1. Alexander brought scientists to study plants and animals on his conquests

2. Hellenistic Egypt

a. Alexandria

- 1.) Greek capital of Egypt
- 2.) founded by Alexander
- 3.) grew rich from trade between Europe, Africa, and Asia

b. the Great Library

- 1.) funded by the trade
- 2.) founded by the Ptolemies
- 3.) wanted to **acquire** – get ahold of or obtain, a copy of every book in the world
- 4.) collected 500,000 scrolls

3. city of scholars

a. Jewish scholars created the Septuagint, a translation of the Hebrew Bible into Greek, at the Great Library

b. Euclid, Theon, and Hypatia lived and worked in Alexandria

c. Archimedes studied there

- 1.) invented the Archimedean screw
 - a.) lifted water for irrigation
 - b.) drained swamps
- 2.) made important mathematical contributions as well

4. Greek culture spread

a. influenced Romans in Italy

b. created the Greco-Roman or **classical civilization** – the civilization of the ancient Greeks and Romans

5. exchange between continents

a. cities along the Silk Road became sites of encounter, spreading

- 1.) religions
- 2.) cultures

b. spread ideas and ways of life from many different regions

- 1.) Europe
- 2.) Africa
- 3.) Asia
- 4.) connected people from the Mediterranean to China

c. became great gathering places for

- 1.) traders
- 2.) artisans
- 3.) merchants