DAY 4: 6th Grade

ELA
MATH
## SCIENCE
SOCIAL STUDIES

Ancient Greece
COMPLETE UNIT GUIDE PACKET

OVERVIEW

Ancient Greece refers to the period following the Mycenaean civilization, which ended around 1,200 BCE, up to the death of Alexander the Great In 323 BCE. It was a period of political, artistic, philosophical, and scientific achievements that had a tremendous influence on Western civilization.

The early time of ancient Greece is marked by the ending of the Dark Ages following the Mycenaean collapse. Due to Greece's geography of mountains and seas, Greece never fully united. Instead they developed individual city-states, or the polis. The polis became the defining feature of Greek political life for hundreds of years. Different forms of government emerged in each city-state, but it is the creation of democracy in the city state of Athens and its written constitution for government that has left such a lasting impact on modern society.
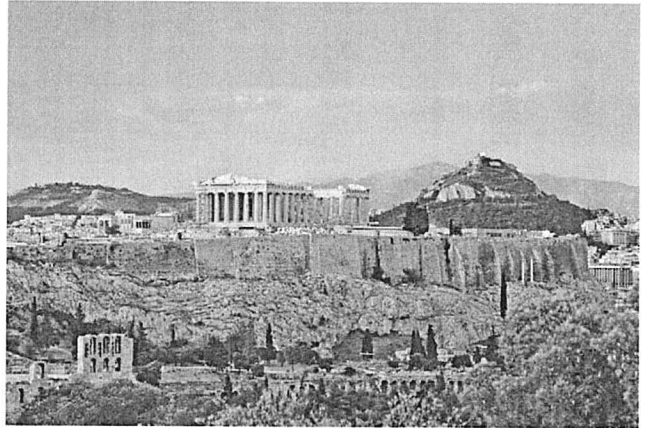
Geography also had a large impact on the economy and culture of Greece. Limited arable land forced the Greeks to be avid fishermen and led them to further colonize for natural resources around the Mediterranean basin. This colonization led them into their first major conflict, the Persian War, which lasted from 499-449 BCE. The Greeks fought the Persians for control of the Aegean Sea, and the Ionian colonies. Two major battles, Salamis and Marathon, gave Athens great prestige, which ultimately led Greece to its second major conflict, the Peloponnesian War. This civil war between Athens and its rival city-state Sparta from 431- 404 BCE weakened Greece's defenses and left them vulnerable to invasion. This ultimately came from the conquering Macedonians, led by Philip II. After Philip's death, his son Alexander the Great would go on to conquer much of their known world.

Ancient Greece is credited with renowned philosophical thought, stemming from the philosophers Socrates, Plato, and Aristotle. Ethics and morality of government were called into question, as was the idea of civil duty. The world's first historians also were Greek, and the works of Thucydides and Herodotus have provided us with some of the most accurate descriptions and accounts of the ancient world. The stories of the epic poet Homer, such as the *Odyssey* and *Iliad*, are still taught today and served as a cultural tie for the various city-states. Ancient bards travelled across Greece telling these epic poems and other myths about the Olympic pantheon. The style of classical architecture invented by the Greeks is still evidenced in modern society, and the early dramatists and humorists, such as Aeschylus and Sophocles, led to the creation of theater.

ESSENTIAL QUESTIONS

a) How did the geography of Greece impact culture and economy?

b) What enabled ancient Greece to share the common cultural traits of language and religion despite having separate city-states?

c) How was Greece able to defeat the Persian Empire in the Persian Wars?

d) How have the legacies of ancient Greece impacted our modern society?

e) What role do citizens play in government? Is it important to limit the power of government?

f) How did Alexander the Great create an empire?

g) What was the impact of the spread of Hellenic culture under Alexander the Great?

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VOCABULARY

Directions: Write the definition for each word in the middle column and draw a picture to represent each in the 3rd column.

Agora		
Bard		
Citizen		
City-State		
Colony		
Epic		
Golden Age		
Pantheon		
Philosophy		

Lesson #104   Day 4

The Oort Cloud: The Edges of Our Solar System

When scientists observe patterns or irregularities, they look for causes. This practice often leads to predictions, followed by discoveries. The discoveries of both Neptune and Uranus were based on scientific predictions.

The Oort (ort) cloud is another example of a prediction. In 1950, astronomer Jan Oort was studying the patterns of long-period comets. He observed that long-period comets did not orbit in the ecliptic. Based on this observation, Oort made a prediction.
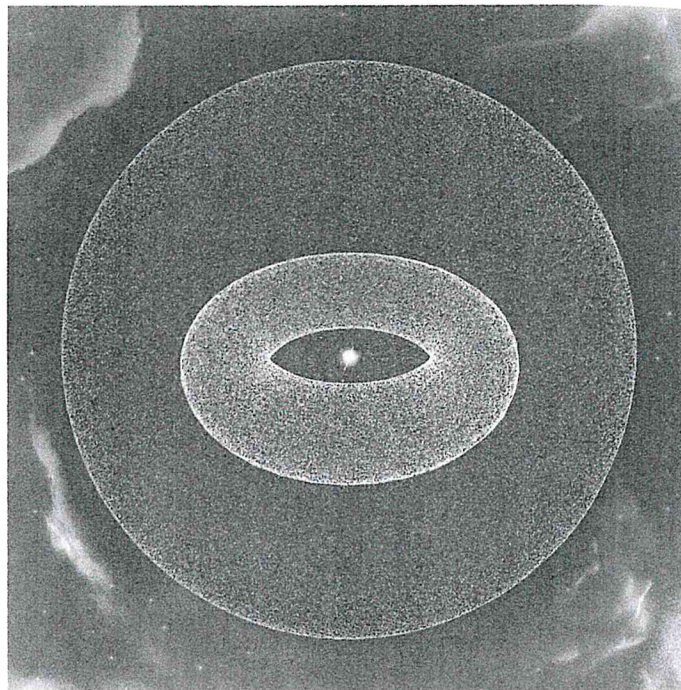
He calculated that these comets traveled an incredible distance—as far as 50,000 AU from the sun. He proposed that long-period comets come from the far reaches of the sun's gravitational pull. Remember that gravity weakens with distance. The sun's gravity can only reach so far into outer space. Oort envisioned an area of icy objects at the edge of our solar system. As stars and star systems outside our solar system move past this region, their gravity disturbs the icy objects and flings them toward the sun.

This illustration shows the donut-shaped Kuiper Belt inside the Oort cloud. Scientists believe that the Oort cloud is populated with planetesimals that become long-period comets.

Oort further proposed that this region would have a spherical, or bubble shape. This would explain the angles observed in the orbits of long-period comets. Unlike objects that orbit Earth in a flat belt, objects in a sphere can come from above or below the ecliptic. They can come from any part of the bubble.

It is assumed that the Oort cloud is enormous. Its inner edge is thought to begin 2,000 AU from the sun, and it may be almost 100,000 AU thick. Trillions of objects may be in the Oort cloud.

The Oort cloud is believed to have formed from remnants spread throughout the early solar system. As the planets formed, gravity flung these planetesimals into the outer regions of space.

It is important to note that the Oort cloud is just a model. This large, thick bubble of space debris is so far away that no telescope or spacecraft has yet reached it. No object in the cloud has ever been seen or photographed. For now, the Oort cloud is a theory.

1. The _____ is theorized to be a bubble-shaped area of icy objects at the edge of our solar system.

2. Choose the phrases that describe the Oort cloud.

_____ For now, it is a theory. No one has ever seen objects in the Oort cloud.

_____ It is thought to be the farthest region of our solar system.

_____ It may contain billions or even trillions of objects.

_____ The objects in the cloud orbit the sun in the ecliptic.

3. Objects in the Oort cloud are held very weakly and can be disturbed by objects outside our solar system. Which of these statements support this idea?

_____ Objects that are held weakly don't travel in the ecliptic.

_____ The strength of gravity decreases with distance.

_____ There is a limit to the sun's gravitational pull.

4. What are long-period comets?

A) icy objects that come from the outermost regions of our solar system

B) objects that take at least 200 years to orbit the sun

C) space objects that orbit a larger object

D) both A and B

5. To determine the definition of a planet, scientists _____.

A) conducted research, set criteria, and used peer review

B) chose the opinion of the most popular expert

C) decided to limit the number of planets in a solar system

D) held a contest and used a panel of judges to choose the best submission

6. How do dwarf planets differ from planets?

A) Dwarf planets do not have a clear orbital path.

B) Dwarf planets are not spherical.

C) Dwarf planets do not orbit the sun.

D) none of these

7. Water both melts and freezes at 0°C. Explain how this is possible.

_____

_____

_____

PRACTICE TEST
PART 4: STUDY SKILLS

Questions 1-4. Use this section of a dictionary page to answer the questions.

pan•o•ram•a (pan'ə ram'ə, rä'mə) *n.* **1.** complete or unbroken view of an area in every direction: *A vast panorama of the valley lay before us.* **2.** complete survey or presentation of a subject: *a panorama of the current political scene.* **3.** picture or series of pictures representing a continuous scene, unrolled and passed continuously before the spectators. **4.** continuously passing or changing scene. [PAN + Greek *horāma* view.] —**pan'o•ram'ic,** *adj.* —**pan'o•ram'i•cal•ly,** *adv.*

pat•i•o (pat'ē ō') *pl.,* **-i•os.** *n.* **1.** terrace **2.** inner court open to the sky, as in a Spanish or Spanish-American house. [Spanish *patio* courtyard, possibly going back to Latin *patēre* to lie open.]

pel•let (pel'it) *n.* **1.** small ball, as of food, medicine, or paper. **2.** bullet or piece of shot. **3.** ball, usually of stone, formerly used as a missile, as in a cannon. [Old French *pelote* small ball, going back to latin *pila* ball.]

pen•sion (pen'shən) *n.* regular payment, other than wages, made to a retired person who has fulfilled certain requirements or conditions, by a former employer. —*v.* **1.** to grant a pension to. **2.** to retire or dismiss with a pension (with *off*). [Old French *pension* payment, from Latin *pēnsiō.*]

at; āpe; cär; end; mē; it; īce; hot; ōld; fôrk; pùt; cūte; rüle; oil; out; up; tėrm; sing; thin; **this**; hw in white; zh in treasure. The symbol ə stands for the sound of a in about, e in taken, i in pencil, o in lemon, and u in circus.

1. What part of speech is the word *pellet*?
   a noun
   b verb
   c adjective
   d adverb

2. Which definition fits the meaning of *panorama* as it is used in the sentence below?

   His talk provided us with a *panorama* of our town history.

   a def. 1
   b def. 2
   c def. 3
   d def. 4

3. The *i* in *patio* is pronounced like the —
   a *e* in *end*
   b *i* in *ice*
   c *e* in *me*
   d *i* in *pencil*

4. In another part of the dictionary, under which guide words should you look to find the word *carillon*?
   a caraway - caretaker
   b cargo - caribou
   c carom - carter
   d caricature - carnival

PRACTICE TEST

Questions 5-7. Use this part of an index to answer the questions.

Index, continued

Bill of Rights, *See* **Constitution**
Congress
    election to, 340, 379-381
    legislation, 456-458
    qualifications for office, 340-341
    See also **House of**
    Representatives, Senate
Constitution, 83-120
    amending, 114-115, 345
    Bill of Rights, 90-92
    Preamble, 99
    principles, 88-89
    ratification, 83-85, 115-116
    text, 99-120

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5. On what pages should you look for information about the Bill of Rights?
   a 88-89   c 115-116
   b 90-92   d 340-341

6. Under which heading should you look for more information about Congress?
   a Constitution   c Senate
   b voting   d elections

7. On which page would you find the Preamble to the Constitution?
   a 88   c 92
   b 90   d 99

Questions 8-11. Choose the best answer to each question.

8. Gene wants to find information about Japanese-American conductor Seiji Ozawa. He should look in the encyclopedia under —
   a Japanese
   b American
   c Seiji
   d Ozawa

9. Between which two guide words in the encyclopedia should you look to find information about Trinidad?
   a Tribune - Trickster
   b Tricorne - Trilateral Commission
   c trimaran - Trinity College
   d Triple Entente - Tristan

10. Regina wants to find the population of the United States in 1950. In which reference source should she look?
   a atlas
   b almanac
   c newspaper
   d magazine

11. Which question could best be answered by using a card catalog?
   a What books have been written about Russian history?
   b What is the definition of the word *intrepid*?
   c How tall is the average kangaroo?
   d Where is the town of Oshkosh?

PRACTICE TEST

Toni is writing a report about the New England states. She is using the table below as a reference. Use the table to answer questions 12-13.

STATE	CAPITAL	POPULATION	ADMITTED TO UNION
Connecticut	Hartford	3,107,576	1788
Maine	Augusta	1,124,660	1820
Massachusetts	Boston	5,737,037	1788
New Hampshire	Concord	920,610	1788
Rhode Island	Providence	947,154	1790
Vermont	Montpelier	511,456	1791

12. Which New England state has the largest population?
   a Connecticut
   b Massachusetts
   c New Hampshire
   d Vermont

13. Which was the last New England state to be admitted to the Union?
   a Rhode Island
   b Vermont
   c Maine
   d Connecticut

Use the catalog card to answer questions 14-15.

INDIANS OF NORTH AMERICA
398.2
H   Highwater, Jamake.
        Anpao: an American Indian odyssey; illustrated by Fritz Scholder. —Philadelphia: Lippincott, c 1977.
        256 p. : illus.

14. Who wrote this book?
   a Jamake Highwater
   b Anpao
   c Fritz Scholder
   d Lippincott

15. What is the title of this book?
   a *Indians of North America*
   b *Jamake Highwater*
   c *Anpao: An American Indian Odyssey*
   d *Philadelphia: Lippincott*

PRACTICE TEST

Questions 16–17. Use the outline to answer the questions.

Jupiter

I. Description
   A. Size and color
   B. Position in solar system
   C. _____
   D. Atmosphere
   E. Moons

II. Exploration
   A. _____
      1. *Pioneer* missions
      2. *Voyager* missions
   B. Future plans

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16. Which topic best fits the blank beside I.C?
   a Myths
   b Surface features
   c Space voyages
   d The sun

17. Which topic best fits the blank beside II.A?
   a Past achievements
   b Astronauts
   c Saturn, Neptune, Pluto
   d Moons of Jupiter

Questions 18–20. Choose the best answer to each question about writing research reports.

18. Fran wants to summarize her research on the characteristics of volcanoes. Which of the following should Fran use as a main topic in her summary?
   a Volcanic Rocks Useful to People
   b The Structure of a Volcano
   c Eruption of Mount St. Helens in 1979
   d Volcanic Dust Carried Great Distances

19. Which detail should Fran include under the main topic "The Eruption of a Volcano"?
   a melted rock called lava flows out of the volcano
   b lava cools and builds up cone of volcano
   c some islands created by volcanoes under ocean floor
   d three main types of volcanoes

20. Joe is taking notes for a report on water pollution. Which detail should he include under the main topic "Sources of Pollution"?
   a Safe Drinking Water Act protects water from pollution
   b disease and infection spread by polluted water
   c polluted water smells bad
   d chemical wastes from industry discharged into water

Lesson #4

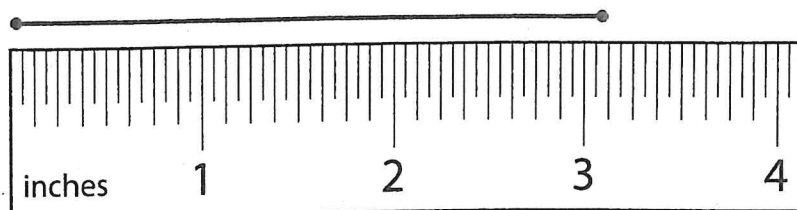1. $9\frac{2}{7} - 6\frac{5}{7} = ?$

2. $3,265,818 + 9,375,962 = ?$

3.   What is the length of the line segment in inches?

4. $\dfrac{5}{12} \times \dfrac{24}{25} = ?$

5.   Draw parallel lines.

6. $80,000 - 69,214 = ?$

7.   On a miniature golf course, the distance from the tee to the 1st hole is 96 inches. The distance to the 2nd hole is 3 yards. On the 3rd tee, the hole is 12 feet away. Which of the tees is farthest from the hole?

8.   Write $\dfrac{7}{20}$ as a decimal and as a percent.

9.   Write the formula for finding the volume of a prism.

10.   What number is 80% of 30?

11.   How many years are 7 decades?

12. $\dfrac{7}{8} \div \dfrac{2}{5} = ?$

13.   Write the reciprocal of $\dfrac{3}{7}$.

14.   Find $\dfrac{1}{6}$ of 72.

15.   Put $\dfrac{15}{20}$ in simplest form.

16. $30 \times 7 \div 3 = ?$

17.   What percent of 70 is 49?

18.   If $3x = 21$, what is the value of x?

19.   Is the more reasonable length of a pick-up truck 40 km or 40 m?

20.   List the factors of 18.

1.	2.	3.	4.
5.	6.	7.	8.
9.	10.	11.	12.
13.	14.	15.	16.
17.	18.	19.	20.