Parthenon: Design and Architecture: Teacher’s Guide

Grade Level: 6-8  Curriculum Focus: Ancient History  Lesson Duration: Two class periods

Program Description
Learn about the building techniques of the ancient Greeks, from the quarrying of huge blocks of marble in the mountains surrounding Athens to the intricate carvings of magnificent sculptures that once adorned the Parthenon.

Onscreen Questions
Part I—Before watching the video
- What do you know about Athens, Greece, and the beginning of western civilization?
- How would you describe ancient Greek culture? Consider the significance of Greek art, architecture, government, and literature.
- As you watch the program, look for examples of Athenian contributions to the western world.

Part I—After watching the video
- The Parthenon is being restored with many of the same techniques used by the original builders. How are the building techniques today different from those of ancient Athens?
- What are some similarities between the work of current and classical artisans?

Part II—Before watching the video
- Why do you think societies throughout history have built large, impressive structures, despite great financial and human costs?
- As you watch the program, note the reasons that the Athenians built the Parthenon. What risks did the Athenian builders encounter?

Part II—After watching the video
- In the fifth century, the Parthenon was converted to a Christian church. Its sculptures were removed and many were destroyed. Why did the Parthenon continue to be an important structure long after the period of ancient Greece?
- What does the Parthenon represent today?
Lesson Plan

Student Objectives

- Describe the location, purpose, and significance of the Parthenon and the Acropolis; and
- Describe the form and function of the Parthenon and its major parts.

Materials

- *Parthenon: Design and Architecture* video and VCR
- Newsprint
- Paper and markers (for each group)
- Internet access
- Photocopier
- Color printer
- Print resources about ancient Greece and the Parthenon

Procedures

Note: Before you begin this activity, prepare three simple outlines of the Parthenon: its facade, the long side of the structure, and a floor plan that includes locations and numbers of walls and columns. (Dimensions and images can be found at the Web sites listed below.) Do not label any rooms or structures. Make five copies of each sketch.

1. Have students locate Greece on a world map. Explain that the history of Greece stretches back thousands of years. Ask students to brainstorm about what they know of ancient Greece. On a piece of newsprint, write their ideas, categorized as politics, religion, architecture, philosophy, sports, and daily life.

2. As an introduction to Greece, Athens, and the Parthenon, share the following facts with the class:
   - The Classical Age (about 500 to 323 B.C.) was the most influential period of ancient Greece. The Greeks developed ideas about philosophy, religion, government, science, and art. Great accomplishments of this age include the rise of democratic city-states and the Parthenon. The philosophers Socrates and Plato and playwrights Sophocles, Euripides, and Aristophanes lived during this time.
   - Ancient Greece was divided into several independent city-states. The city-state of Athens was the center of Greek culture and arts. (Point out Athens on the map.)
   - Sitting on top of a hill at the center of Athens is the Acropolis, a collection of monuments and temples dedicated to the gods. The best known of these monuments is the Parthenon, dedicated to Athena Parthenos, the patron goddess of Athens. Built between 447 and 432 B.C., the Parthenon is the international symbol of ancient Greece.
and may be the best example of Doric architecture, the earliest and simplest of the classical Greek styles.

3. Tell students that the class will create a composite picture of the entire Parthenon. Students will work in groups to learn about one aspect of this structure. Then all will share what they've learned with the class. Divide the class into five groups, and give each group an assignment below. Give students copies of the sketches and explain that they should fill in, label, or color the parts of the Parthenon. Web sites listed below will provide information.

**Group 1: Rooms**
- What were the *pronaos*, *naos* (or cella), and *opisthodomos*? And what was the purpose of each room? (The *pronaos* was the front porch, the *naos* was the main room that held the statue of Athena, and the *opisthodomos* was the back room, used to hold offerings brought to the deity.)
- What was unique about the dimensions and proportions of the naos? (The proportion between length and width was slightly greater than two to one.)
- How was its length and height related to its purpose? (It was long and tall to hold a statue.)
- What was unique about the columns around the *pronaos*? (They were Ionic, not Doric.)
- What was the main material used to build the Parthenon? (marble)
- Until the Parthenon was built, what material had most temples been made of? (wood)

**Group 2: Columns and Capital**
- How many columns were on each end of the Parthenon? (8 rather than the usual 6)
- How many along the sides? (17)
- What was unique about this proportion? (Each side had twice-plus-one the number of columns at each end.)
- What were some of the optical illusions used to make them appear more graceful? (Each exterior column has a very slight bulge in the middle. Also, the upper diameter of each is slightly narrower than its base diameter. Columns slant inward.)
- What was the *peristyle*? (the colonnade running around the *naos* and supporting its roof)
- What were the *capitals*, *abacus*, and *echinus*? (A *capital* is the part at the top of the column, the *abacus* is the upper portion of the capital, and the *echinus* is the lower portion of the capital.)
- What is unique about the Doric capital? (The abacus is square and the echinus is rounded.)
Group 3: Base and Floor

• What are the crepidoma and the stylobate? (The crepidoma was the stone base of the temple, with three levels or steps; the stylobate was the top level that formed the floor of the temple.)

• What were they made of? (stone)

• What optical refinements were used? Why? (The three levels of the crepidoma are slightly domed in the center because purely horizontal lines would have appeared to dip in the middle.)

Group 4: Friezes

• What are the entablature, frieze, triglyph, and metope? (The entablature is the stretch of wall between the tops of the columns and the roof; the frieze is the horizontal band running along the wall, just under the cornice. There were two parts of the frieze: the triglyphs, or blocks with vertical grooves, and metopes, or rectangular areas.)

• What were found in the metopes along the outer sides of the Parthenon? (stone carvings of legendary battles)

• What was specifically depicted in the metopes on the north end? (the Trojan War)

• What was found in the frieze along the four outside walls of the naos? (Sculpture depicting a religious procession—probably the Panathenaea procession—with horsemen, chariots, gods, and beasts)

Group 5: Roof

• What was the pediment? (the triangular space directly under the two sides of the sloping roof at the ends of the Parthenon)

• What did archaeologists find at each pediment? (Sculptures of two mythological scenes: The east end shows the birth of Athena; the west end shows Athena and Poseidon fighting over the name of the city.)

• How were these sculptures decorated? (They were painted bright colors.)

• What was the roof made of? (marble tiles)

4. Have each group create a report that answers the questions assigned. Students should fill in, color, and label at least one of the sketches and include one or two pictures or original drawings. Finally, have each group present its findings in the order of the group numbers. Ask groups to hang their reports and pictures on the appropriate place on a bulletin board labeled “master drawing” of the Parthenon.

The Parthenon

• [http://www.jccc.net/~jjackson/part.html](http://www.jccc.net/~jjackson/part.html)

• [http://www.culture.gr/2/21/211/21101a/e211aa01.html](http://www.culture.gr/2/21/211/21101a/e211aa01.html)

Images and Plans

• [http://www.perseus.tufts.edu/cgi-bin/architindex?entry=Athens,Parthenon](http://www.perseus.tufts.edu/cgi-bin/architindex?entry=Athens,Parthenon)
Acropolis Images (see the Parthenon section)
- http://www.indiana.edu/~kglowack/athens/acropolis.html

The Acropolis Experience (see the 3D animated walk-through of the Parthenon)

The Goddess Athena

Assessment
Use the following three-point rubric to evaluate students’ work during this lesson.

- **3 points:** Students actively participated in class discussion; demonstrated strong research skills; made a clear, thorough presentation with several details about the topic.

- **2 points:** Students participated in class discussion; demonstrated on-grade research skills; made a complete presentation with some details about the topic.

- **1 point:** Students participated little in class discussion; demonstrated weak research skills; made an incomplete presentation with few or no details about the topic.

Vocabulary

**acropolis**
*Definition:* The upper fortified part of an ancient Greek city. The Acropolis is the collection of temples in Athens.
*Context:* The Parthenon stands on the Acropolis, overlooking Athens.

**ancient**
*Definition:* Relating to the historic period beginning with the earliest known civilizations and extending to the fall of the Roman Empire in A.D. 476
*Context:* The culture of ancient Greece had rich traditions, many of which exist today.

**classical**
*Definition:* Relating to the ancient Greek and Roman world, especially to its literature, art, architecture, or ideals
*Context:* The Classical Age of Greece began with the Persian War (490-479 B.C.) and ended with the death of Alexander the Great (323 B.C.).

**colonnade**
*Definition:* An evenly spaced row of columns usually supporting the base of a roof structure
*Context:* A colonnade runs along the entire exterior of the Parthenon.
mythology
Definition: A group of myths belonging to a particular people or culture that tells about their history, heroes, and gods
Context: In Greek mythology, powerful and immortal gods who look and act like humans can control nature.

Academic Standards
Mid-continent Research for Education and Learning (McREL)
McREL’s Content Knowledge: A Compendium of Standards and Benchmarks for K-12 Education addresses 14 content areas. To view the standards and benchmarks, visit link: http://www.mcrel.org/compendium/browse.asp
This lesson plan addresses the following national standards:
- History—World History: Understands technological and cultural innovation and change from 1000 to 600 BCE
- Language Arts—Reading: Uses reading skills and strategies to understand and interpret a variety of informational texts

The National Council for the Social Studies (NCSS)
NCSS has developed national guidelines for teaching social studies. To become a member of NCSS, or to view the standards online, go to http://www.socialstudies.org
This lesson plan addresses the following thematic standards:
- Culture
- People, Places, and Environment
- Civic Ideals and Practices

Support Materials
Develop custom worksheets, educational puzzles, online quizzes, and more with the free teaching tools offered on the Discoveryschool.com Web site. Create and print support materials, or save them to a Custom Classroom account for future use. To learn more, visit
- http://school.discovery.com/teachingtools/teachingtools.html