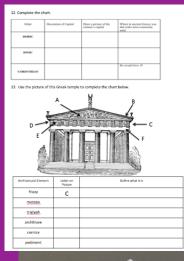
# **Greek Architecture**

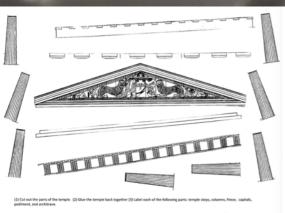
# A Learning Bundle











#### Ancient Greek Architecture

The ancient Greeks attached little importance to the building of private homes, which were usually simple structures made of mud and brick. Instead, they devoted their energy, money, and skills to the design and construction of public buildings. The most important of these were temples,

#### Building Materials & Techniques

From the 7<sup>th</sup> century 8.C., temples and other large public buildings were made out of stone, typically limistone or marble. Parts of the building, such as the frame of the roof and ceiling, were built from wood. Roof tiles were usually made out of terracotta, a type of reddish pottery that is fired in a kiln.



Masons, professional stone cutters, use hammers, mallets, and chisels to shape the stones.

Columns were not made from a single piece of stone. Instead, the mason shaped stones into round, cylindrical (circular) shapes, called drums, that were stacked on top of each other and held together with metal pcgs.



The grooves, known as fluting, on the columns were used to make it look like the column was cut from one piece of stone. The carving of the fluting was begun on the ground and then was finished once the column had been er



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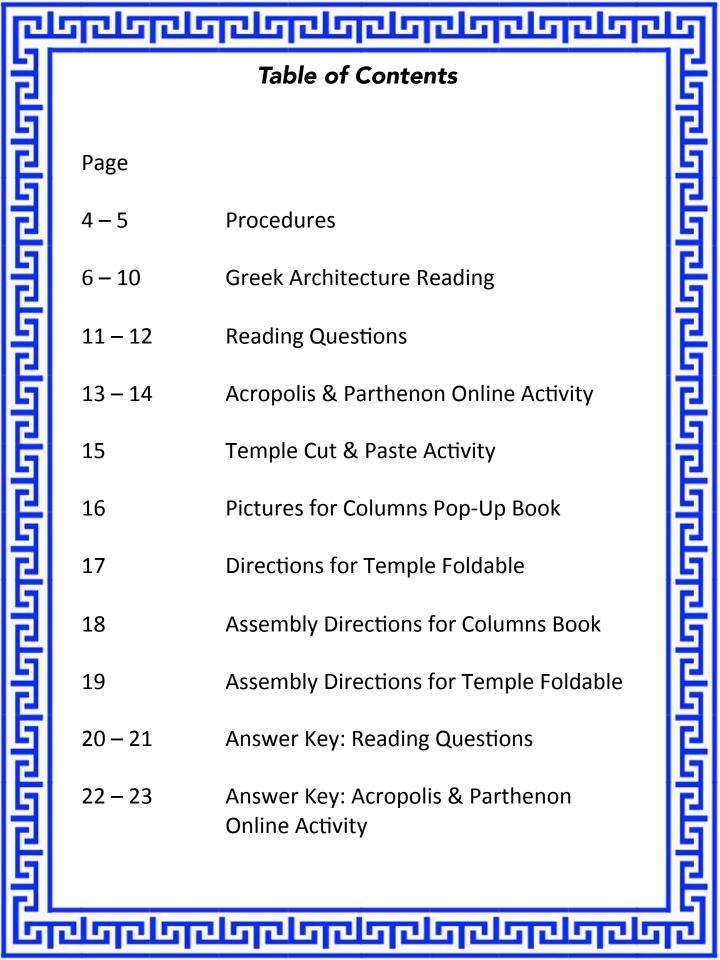
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## Our Website

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## **Procedure**

- 1. Make copies of all student pages.
- 2. Distribute copies of the Ancient Greek Architecture Reading and Questions.
- 3. Explain to students that the questions follow along with the reading, so they should answer the questions as they read.
- 4. Give students time to complete the work.
- 5. When finished, you have a choice:
  - A. Go over the answers with the Answer Key.
  - B. Project the Answer Key and have students check their work.
  - C. Have students partner up to check their answers.
- 6. Gather the following supplies for each student: pair of scissors, glues stick, two sheets of white construction paper (9x12).
- 7. The next activity is the construction of the Columns Pop-Up Book. You may want to use the Assembly Directions to construct a sample book before doing the activity with your class.
- 8. Distribute the supplies and copies of the columns pictures.
- 9. Using the Assembly Directions, walk your students through the process of constructing the book. You will want to model a step, pause, allow students to complete the step, and then continue the process like that.
- 10. Write the following requirements on the board:

#### Front of Book

- Title: Greek Columns
- Label the parts of the column: shaft, base, capital

### **Inside the Book**

- Above the picture of each column, label each type of column: Ionic, Doric, Corinthian
- Under the picture of each column, describe the decorations on the capital, identify the shaft as being thick or thin, and whether or not the column has a base.

A photograph of a sample pop-up book is included on the Assembly Directions

11. The next activity is assembly of a cute and paste temple. You may want to try the activity yourself before doing the activity with your class.

## **Procedure (contd.)**

- 12. Distribute copies of the cut and paste temple activity and the following supplies to each student: a pair of scissors, a glue stick, and a single piece of white paper.
- 13. Go over the directions, that are written at the bottom of the paper, with students. Then give them them time to complete the activity.
- 14. Arrange for each student to use an electronic device that accesses the internet.
- 15. Distribute copies of the Acropolis & Parthenon Online Activity.
- 16. Review the directions with students and have them navigate to the website.
- 17. Give students time to complete the work.
- 18. When finished, you have a choice:
  - A. Go over the answers with the Answer Key.
  - B. Project the Answer Key and have students check their work.
  - C. Have students partner up to check their answers.
- 19. The last activity is the construction of a Greek Temple. You may want to use the Assembly Direction to construct a sample temple before doing the activity with your class. Photographs of a sample temple are located on the Assembly Directions.
- 20. Gather the following supplies for each student: pair of scissors, a ruler, and a sheet of white construction paper (12x18). Gather markers or crayons for the class to use.
- 21. Distribute the supplies.
- 22. Using the Temple Assembly Directions, walk your students through the process of constructing the temple. You will want to model a step, pause, allow students to complete the step, and then continue the process like that.
- 23. Distribute copies of the Temple Directions. Go over the directions with students. For information, students should use their Greek Architecture Questions. If your students haven't covered the Greek god and goddesses, students may have to do some research about the god or goddess that they chose.
- 24. Give students time to complete the work.

# **Ancient Greek Architecture**

The ancient Greeks attached little importance to the building of private homes, which were usually simple structures made of mud and brick. Instead, they devoted their energy, money, and skills to the design and construction of public buildings. The most important of these were temples, which provided a place for people to gather for religious festivals.

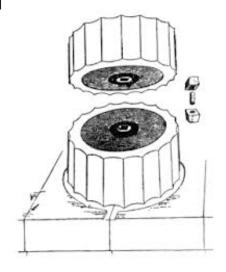
## **Building Materials & Techniques**

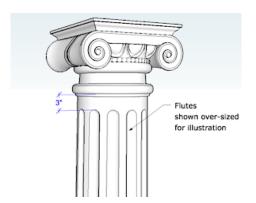
From the 7<sup>th</sup> century B.C., temples and other large public buildings were made out of stone, typically limestone or marble. Parts of the building, such as the frame of the roof and ceiling, were built from wood. Roof tiles were usually made out of terracotta, a type of reddish pottery that is fired in a kiln.



Masons, professional stone cutters, used hammers, mallets, and chisels to shape the stones.

Columns were not made from a single piece of stone. Instead, the mason shaped stones into round, cylindrical (circular) shapes, called drums, that were stacked on top of each other and held together with metal pegs.



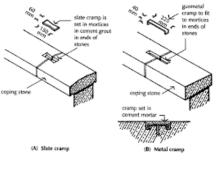


The grooves, known as fluting, on the columns were used to make it look like the column was cut from one piece of stone. The carving of the fluting was begun on the ground and then was finished once the column had been erected.

Ropes and pulleys were used to lift the blocks of stone. The stones were then maneuvered into places with levers. Each block was joined to the ones beside it with pieces of metal called cramps.



Each block was also joined to ones above and below it with rods called dowels.

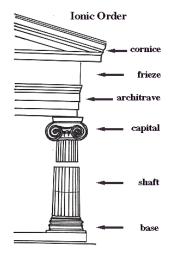


cramps

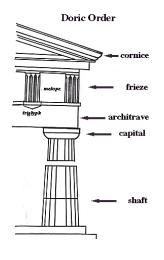
When the stone blocks were in place, the masons polished the stones with a hard stone and a lubricant.

## **Architectural Styles**

The design of most ancient Greek buildings was based on a series of columns. The design probably came from earlier buildings in which tree trunks had been used to support roofs. These tree trunks evolved into stone columns. There were three main architectural styles, or orders, used by the ancient Greeks: Doric, Ionic, and Corinthian.

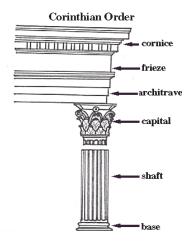


The **Ionic Order** was popular on the Greek islands and Greek colonies located on the cost of Asia Minor, which was called Ionia, that gave its name to the Ionic columns. Ionic columns have a base, thin shaft, and capital, or top, decorated with a swirl, that was supposed to resemble the horns of a ram, or male sheep.



The **Doric Order** was popular on the mainland of Greece. It was named after the Dorians, a people who invaded Greece in very ancient times.

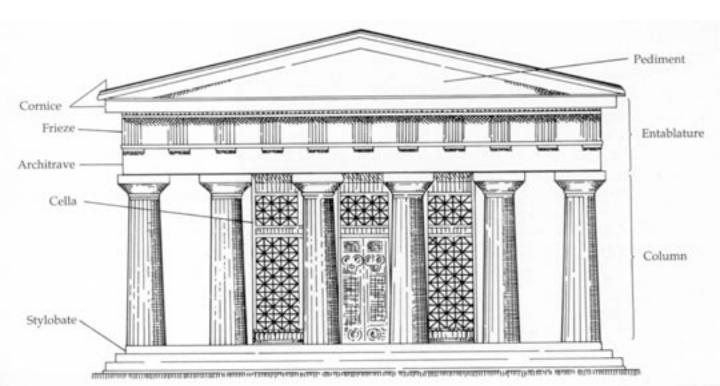
Doric columns have no base, a wide shaft, and an undecorated capital.



The **Corinthian Order** was named after the Greek city-state of Corinth. A Corinthian column has a base, a thin shaft, and a capital decorated with leaves.

## **Elements of a Greek Temple**

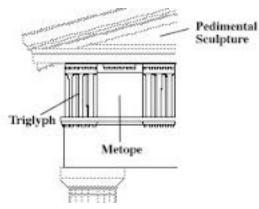
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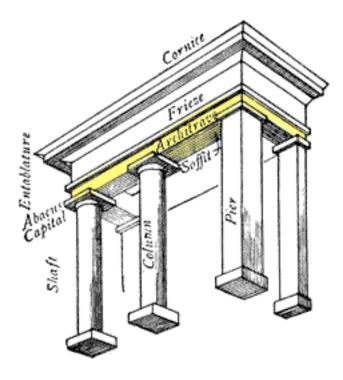




A **frieze** is a horizontal band of sculpture or decoration often located near the ceiling or roof.

On a Greek temple, a **frieze** includes carved sculptures, called **metopes**, and **triglyphs**, or rectangular blocks with several vertical grooves. The triglyphcs and metopes alternate across the frieze.





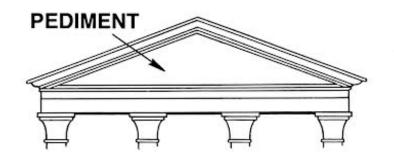
Below the frieze is located the **architrave**, which is is a main beam that rests across the top of the columns.

A cornice, or decorative outline, stretches across the entire building and often around the pediment as well. Conrnices can also be found inside a home, tracing around a room where the walls meet the ceiling. Perhaps you even have some in your house.

cornice inside a modern house



© The Ancient Institute



The triangular top of the front of a building is called a **pediment**. On Greek temples, the pediment often contains elaborate sculptures

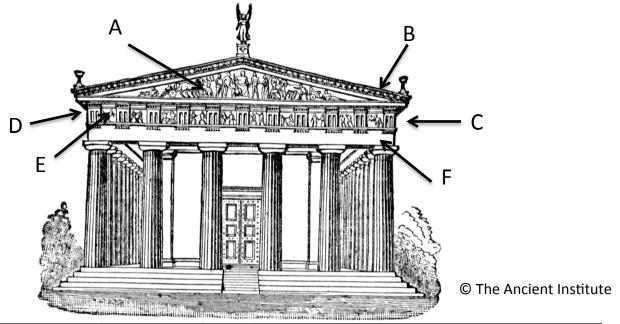


Name:	Greek Architecture Questions	
Building Materials & Techniques		
1. In constructing ancient Greek temples, desc	cribe the materials used to build: (be specific)	
the walls:		
the roof:		
the roof tiles:		
2. What is the job of masons on an ancient Gre	reek construction site?	
3. How did ancient masons shape stones without	out machines?	
4. Draw and label a diagram showing how anci	cient Greek columns were constructed. Be specific.	
5. What was fluting?		
6. Why did the Greeks include fluting on colum	mns?	
7. How did the Greeks raise the tremendously	y heavy stone blocks into place?	
8. How did the Greeks keep the stone blocks to	together and prevent them from separating over time?	
Architectural Styles		
9. Where did the practice of using columns cor	ome from?	
10. When discussing architecture, what does t	the word "order" mean?	
11. In discussing columns, what is the column'	's capital? © The Ancient Inst	itute

## 12. Complete the chart.

Order	Decoration of Capital	Draw a picture of the column's capital	Where in ancient Greece was that order most commonly used.
DORIC			
IONIC			
CORINTHIAN			Be careful here ©

13. Use the picture of this Greek temple to complete the chart below.

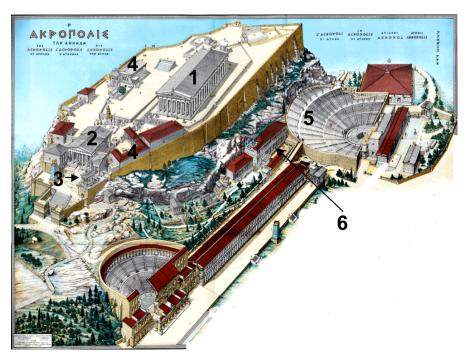


Architectural Element	Letter on Picture	Define what it is
frieze	С	
metope		
triglyph		
architrave		
cornice		
pediment		

Directions: Go to <a href="https://theancientinstitute.wordpress.com">https://theancientinstitute.wordpress.com</a>. Click on Ancient Greece Links at the top. Scroll down to Architecture and choose "The Acropolis".

- 1. Define Acropolis.
- 2. What does the word "acropolis" mean?
- 3. Identify two reasons why people went to an acropolis: (do not use palaces)
- 4. The Most Famous Acropolis . . .
  - A. Location:
  - B. Who worshipped and why:

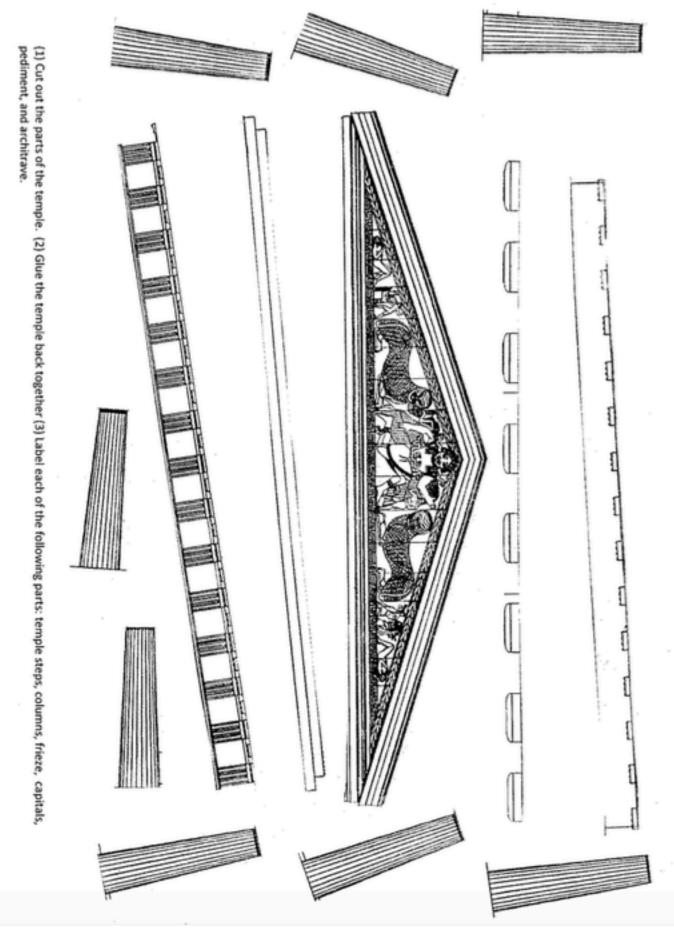
Directions: Go back to <a href="https://theancientinstitute.wordpress.com">https://theancientinstitute.wordpress.com</a>. Click on Ancient Greece Links at the top. Scroll down to Architecture and choose "The Acropolis 3D".

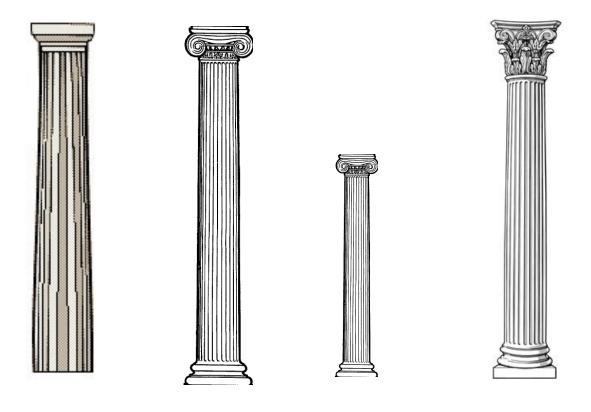


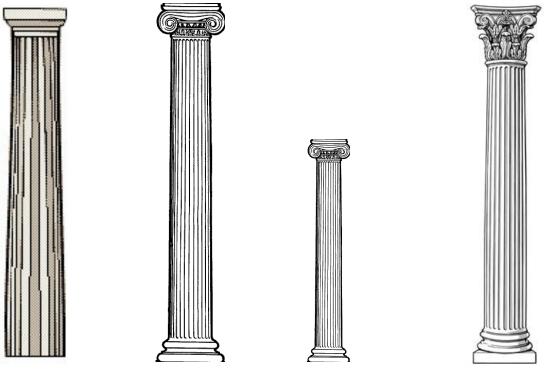
- 1. The **Parthenon** was a temple dedicated to the goddess \_\_\_\_\_
  - A. Why was the goddess Athena called "Parthenos"?
  - B. Look at the picture. What order of columns does the Parthenon have?

C. Inside the Parthenon was kept
(1) the wealth of the city-state of and its allies (Delian League)
(2) a and ivory of
D. Look at the picture. What color is the frieze on the Parthenon?
2. The <b>Propylaea</b> was the entrance to the Acropolis.
A. Look at the picture. What order of columns does the Propylaea have?
B. In the north building, many were on display. Some consider it to be the world's first museum.
C. In front of the south wing was the small temple of Athena as, the goddess of victory. It is number 3 on the map on the other side of this page. What order of columns does that temple have?
D. Read the captions to the pictures. How many columns did the Propylaea have?
3. The <b>Erectheum</b> was a temple dedicated to,, and the legendary King Erectheus of Athens.
A. According to myth, Athena and Poseidon fought over who the city of Athens would be named after.
B. What did Athena offer?
C. What did Poseidon offer?
D. Who won? Think about which city it is!
Directions: Scroll all the way down to the bottom of the screen and click on "South Slope of the Acropolis" to be taken to the next page.
1. The <b>Theater of Dionysus</b>
A. ILook at the picture and circle the answer. In what shape is the theater built: square / half-circle
B. How many people could it hold?
C. Who put up the choragic monuments that stand near it?
5. The <b>Asclepieion</b>
A. Asclepius was the Greek god of d
B. The Asclepieion was an infirmary. What would we call an infirmary today?

C. Why is it called "the place where someone sleeps"?







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### FRONT

- 1. Choose a Greek god/goddess to dedicate your temple to.
- 2. Draw in the architrave and frieze.
- 3. Draw in some steps leading up to your temple.
- 4. Choose which type of column you would like to use. Draw in the columns. I would include at least <u>four</u> on each side. Space them evenly!
- 5. Label the type of column that you used.
- 6. Label the following parts of the temple or column:
  - · base (if no base, write no base)
  - capital
  - shaft
  - fluting
  - pediment
  - architrave
- In the pediment, draw and <u>color</u> a scene relating to that god/goddess. You may wish to draw a scene from a myth that we read or some of his/her symbols.

#### INSIDE

Center

Paragraph about the god or goddess that you chose, including:

- What are god or goddess of
- Four facts about the god or goddess

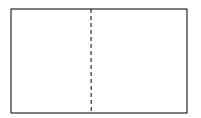
#### Left Side

- Title: "acropolises"
- Colored picture of an acropolis
- Paragraph including:
  - What is an acropolis
  - What were the two purposes of an acropolis

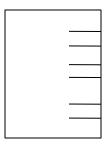
#### Right Side

- Title: "Greek columns"
- Draw the three types of columns
- Label all three types

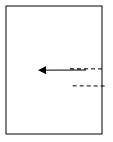
## Pop-Up Book Assembly Directions



Take two pieces of  $9 \times 12$  paper, hold them the "hamburger way", and fold them in half.



Take <u>one</u> of the two pieces. Cut three sets of parallel lines of about one inch into the folded side.



Fold each of the tabs up.

Then push the tabs so that it stand up on its own.

Glue the pictures of each of the three large columns on the fronts of the tabs.

Open the folded paper with the tab on it all the way up.

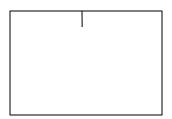
Now glue the other, whole piece of paper behind it, to hide the cut.

Have students glue the small column to the front.

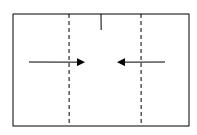


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## **Temple Assembly Directions**

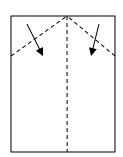


Take a 12 x 16 piece of paper, hold it the "hamburger" way, and fold it so that you just make a mark at the top to find the middle of the paper



Take two side and fold them to the mark in the middle.

Now you should have a "large door"

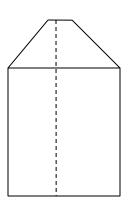


Fold each corner in approximately 4 inches.



Open the triangles that you just folded back up.

Cut off the triangles. Now you have a house shape.





Snip off the tip of the roof to make it flat.

Open the entire thing up.

Take the triangles on the sides and fold them down until they are flat across. Then snip them off.

Fold the doors closed.

#### **Building Materials & Techniques**

1. In constructing ancient Greek temples, describe the materials used to build: (be specific)

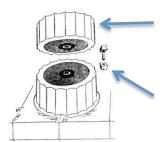
the walls: limestone or marble

the roof: wood

the roof tiles: terracotta pottery

2. What is the job of masons on an ancient Greek construction site? to cut and shape the stone

- 3. How did ancient masons shape stones without machines?
  - They used hammers, mallets, and chisels to cut and shape stones by hand.
- 4. Draw and label a diagram showing how ancient Greek columns were constructed. Be specific.



Masons shaped stones into cylindrical shapes called drums.

They drums were stacked on top of each other and held together by metal pegs.

- 5. What was fluting? grooves on a column
- 6. Why did the Greeks include fluting on columns?

To make it looks like the column was made from one piece of stone

- 7. How did the Greeks raise the tremendously heavy stone blocks into place? They used ropes and pulleys.
- 8. How did the Greeks keep the stone blocks together and prevent them from separating over time?

  Each block was joined to the ones next to it with piece of metal called cramps and to the ones above and below it with rods called dowels.

#### **Architectural Styles**

9. Where did the practice of using columns come from?

Originally tree trunks were used to hold up roofs. The tree trunks were replaced by stone columns.

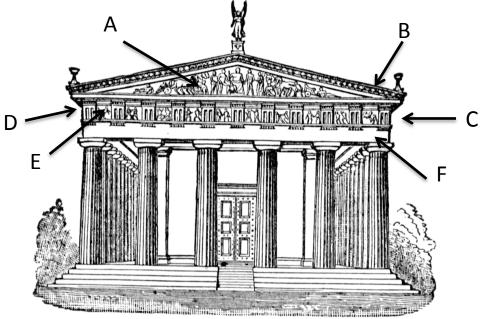
10. When discussing architecture, what does the word "order" mean? architectural style

11. In discussing columns, what is the column's capital? the top of a column

## 12. Complete the chart.

Order	Decoration of Capital	Draw a picture of the column's capital	Where in ancient Greece was that order most commonly used.
DORIC	undecorated		mainland of Greece
IONIC	swirls	<u> </u>	Greek islands and colonies
CORINTHIAN	leaves		Be careful here © city-state of Corinth

13. Use the picture of this Greek temple to complete the chart below.



Architectural Element	Letter on Picture	Define what it is
frieze	С	horizontal band of sculpture or decoration near the roof
metope	E	carved sculptures on a frieze
triglyph	D	rectangular blocks with vertical grooves on a frieze
architrave	F	main beam across the top of columns
cornice	В	decorative outline
pediment	А	triangular top on the front of a building  © The Ancient Institute

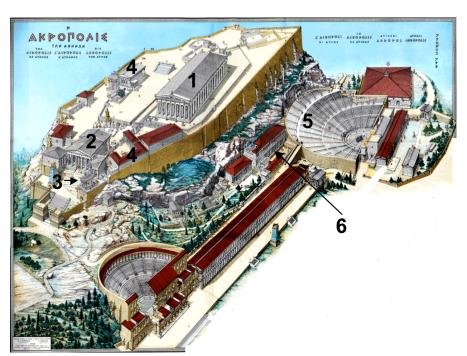
Directions: Go to <a href="https://theancientinstitute.wordpress.com">https://theancientinstitute.wordpress.com</a>. Click on Ancient Greece Links at the top. Scroll down to Architecture and choose "The Acropolis".

- 1. Define Acropolis. hill or rocky mound
- 2. What does the word "acropolis" mean? "high city"
- 3. Identify two reasons why people went to an acropolis: (do not use palaces)
- During times of attack or danger
- To go to worship at temples
- 4. The Most Famous Acropolis . . .

A. Location: Athens, Greece

B. Who worshipped and why: Athena – she was the main goddess of Athens

Directions: Go back to <a href="https://theancientinstitute.wordpress.com">https://theancientinstitute.wordpress.com</a>. Click on Ancient Greece Links at the top. Scroll down to Architecture and choose "The Acropolis 3D".



1. The **Parthenon** was a temple dedicated to the goddess Athena Parthenos

A. Why was the goddess Athena called "Parthenos"? She was a virgin goddess

B. Look at the picture. What order of columns does the Parthenon have?

C. Why is it called "the place where someone sleeps"? what treatments they should use.