# Uncovering the Past: The Humanities of Ancient Greece (Lesson 5)

## **Exploring Greek Architecture**

**Lesson Overview:** This lesson introduces students to the architecture of the Ancient Greeks. The distinctive style from this time period in history can be seen across many countries, including our own. Read the various articles that highlight the distinctive characteristics of this ancient building style with your student; stopping to discuss the comprehension questions. The hands-on activity at the end of the lesson invites your student to explore the challenge of creating their own Greek temple.

Show them the examples below of the Lincoln Memorial in Washington D.C. (top image) and Thomas Jefferson's former residence in Virginia, "Monticello". What do they notice about the architecture?



**1. Pre-reading:** You can begin by asking your student if they happen to see reflections of these styles in modern day architecture.

**2. Reading:** Share with your student the following information (Either they can read this or you can read it together):

### Part I: Greek Architecture

Everything that the Greeks conceived, built, danced, sang, or explained had elements of beauty, symmetry, clarity, balance, proportion, and function. It follows that its unique architecture should also embody these elements.

Historians do not know very much about early Greek architecture because their building materials were mud-brick and wood, which did not last over time. However, beginning in the Classical period, the Greeks began to use stone and marble. Some of those public buildings have survived even today.

The Greeks built different structures to meet different public needs including courthouses, meeting places, theaters, gymnasiums, market areas, fortifications, and temples. Often ancient Greeks would build on the highest point of a city called the acropolis, meaning above the city. This location could be defended most easily and from there, the buildings were visible to the whole city.

#### "The" Acropolis

In Athens in 437 BCE, Pericles began a huge public buildings program that included an entire complex built on the highest point of the city. Historians have come to refer to it as "The" Acropolis. Today there are remains of four significant constructions. The most famous is the Parthenon, a temple built to thank the Greek goddess Athena for saving Greece in the Persian Wars.

Started in the same year was the Propylaea. This was a group of buildings that formed the gateway into the Acropolis. Later in 432 BCE, the Athenians built a smaller temple dedicated to Athena, Nike. Nike means "victory" in Greek. They believed that building the temple would help them achieve victory over the Spartans in the Peloponnesian Wars. Finally on the north side of the Acropolis they built the Erechtheum in 420 BCE. This temple had three sanctuaries for Athena, Poseidon, and a legendary Greek hero called Erechtheus.



### The Acropolis

Reflection Questions Part I: Have your student reflect on what they've learned so far. These can be answered through discussion or writing.

List the six elements that Greeks wanted to see in all things they created.

Why do we know more about architecture since the Classical period that we do before that time?

Why was the acropolis a great place for public buildings?

Make a brief chart with two columns. Write the name of the building on the left and what it was on the right.

Why might a sports apparel and equipment company choose the name Nike?

# Part II: Greek Orders

Historians and architects describe ancient Greek architecture as being built in one of three orders. (The word "order" means "style" in this usage.) The easiest way to distinguish one order from the other is to look at the columns. Greek columns were designed to be functional and hold up the roof of the building. However, true to the Greek way, they also had to embody the other important elements including beauty, symmetry, balance, and proportion.

Most columns had three parts: the plinth (baseblock), the shaft, and the capital (top). The Doric column was the earliest and simplest design. It was used from 600 BCE to 450 BCE and was especially liked by Spartans. It had no plinth, but was tapered and fluted (grooved) from the bottom to the top. The Doric capital was plainand rounded. The more detailed Ionic column was developed and used from 450 BCE to 340 BCE. It had fluting, but an Ionic column also had a plinth and special capital. The capital was decorated with what looked like two scrolls at the top. This design is called a volute. The third order column, the Corinthian, was developed in 340 BCE. This column had a very fancy capital that was decorated with rows of curly leaves. Actually, the Greeks rarely used this style, but the Romans adopted it and used it in their public buildings.



Reflection Questions Part II: Have your student reflect on what they've learned so far. These can be answered through discussion or writing.

What are the three parts of most columns?	
Make a T-chart. Write the name of the order	
on the left and describe the capital on the right.	
Which two orders did the Greeks prefer?	

#### Architecture and Mathematics

Ancient Greek architects knew a lot about mathematics, specifically geometry, and used it to make beautiful building designs. They were aware that symmetry and proportion helped define beauty. The Parthenon architects may have used what we now call the Golden Ratio or Golden Mean for the proportions of that building. Using this ratio, they could make golden rectangles with proportions pleasing to the eye. Simply put, the Golden Ratio is 1 to 1.618. This means that if the short sides of a rectangle were 150 feet, the longer sides would be 150 times 1.618, or 242.7 feet.



#### **Greek Temples**

Every city erected one or more temples to honor their gods and goddesses. From the ruins that remain, we know that there were generally columns at the front of the temple, although there were sometimes columns on more than one side. Above the columns and under the roof there were wide flat areas where Greek sculptors created stone carvings called friezes.

These decorations often showed scenes from myths, legends, or history. Sometimes, the sculptors used this space to carve a message like they did at the Temple of Delphi—"Know Thyself" and "Nothing to Excess." Inside the temple was a statue of the god or goddess, and often a vault to store the town's wealth. Like all Greek buildings, their temples were both beautiful and useful.



#### **Example of a Frieze.**

Reflection Questions Part III: Have your student reflect on what they've learned so far. These can be answered through discussion or writing.

What is the ratio of the Golden Mean?	
What kinds of decorations were on Greek temple friezes?	

# 3. Hand-on Activity: Building a Greek Temple

All Greek cities had temples dedicated to specific gods or goddesses. These beautiful temples were built not only to please their gods or goddesses, but also to express a city's civic pride. The temples were not like our churches today. They were considered houses for the gods. Inside the temples were statues of the deities and a sacred fire on an altar. The common people stayed outside but brought offerings of wine, milk, cakes, and even left some lambs and cows to be sacrificed.

When you look at the pictures of the remains of these temples, you will see they all had columns that were carved in one of the three Greek orders. You will also see that above the columns they placed stones carved with designs. At the two ends of the temple were large triangular sections under the roof. Usually in these triangles were scenes from myths or famous battles. Some temples had special wording on the outside as well.

Task:: Your student will be challenged in building a Greek temple dedicated to a god or goddess. They will be given time to draw sketches and a final blueprint of their temple. The challenge is that they will have just 30 minutes to complete the temple and will only be given a specific set of materials.

#### The materials list includes:

- > 12 paper clips
- > 8 rubber bands
- > 20" transparent tape
- > 2 marking pens
- > 12 thumbtacks
- ➤ 16 pieces of letter-size (8." x 11") paper

To succeed at this task, your student must work diligently (though you can help them if they want you too!)

\*Hint: Your student may want to experiment with similar materials before they actually build the temple. They may also want to sketch some designs to decorate their temple as well.

**4. Extension Activity:** To explore further examples and details surrounding Ancient Greek architecture, check out the Khan Academy link for more information.

★ https://www.khanacademy.org/humanities/ancient-art-civilizations/greek-art/begi nners-guide-greece/a/introduction-to-greek-architecture