



# NASHVILLE PARTHENON EDUCATIONAL RESOURCES

## MNPS STEAM EXPEDITION TO THE PARTHENON



### PRE-VISIT ACTIVITY

*"Many visitors to the Athenian Acropolis have wondered how the large masses of marble used for the monuments were originally hauled to the top of the sacred rock."  
-Dr. Manolis Korres*

#### Introduction:

Have you ever wondered how ancient Greeks built their temples and monuments that have lasted for thousands of years?

One archaeologist, Dr. Manolis Korres, also asked this same question. He spent two decades leading the Parthenon Restoration Project for the Greek Ministry of Culture, meaning he was the lead archaeologist in charge of helping keep the Parthenon in Athens, Greece, safe by studying the monument and rebuilding areas in danger. Dr. Korres is also famous for creating drawings that help us understand how people lived and worked in ancient times.

Dr. Korres wrote a book called *The Stones of the Parthenon* (J. Paul Getty Museum, 2000) whose main character is a column capital that may or may not be used in the Parthenon itself. His book was inspired by the discovery of a large block that looks like it had part of a Doric column capital carved out of the block, but the carving was not finished. We know that large sculptures and building blocks were only roughly carved out near quarries where the stone was harvested, and that final details were carved very near to the stone's final destination.

This is the story of quarrying a block of marble for an 11-ton Doric column capital and transporting it from the quarry to the Acropolis at Athens. Start with a preview some vocabulary words and continue with the story below.

#### Vocabulary:

<b><u>Athens</u></b>	The capital of modern Greece. Athens was one of the leading cities of ancient Greece and the capital of the city-state by the same name.
<b><u>Acropolis</u></b>	The Acropolis of Athens is the tall rock form south of the center of ancient Athens. Throughout many years, many temples were built, including the Temple of Athena Parthenos (the Parthenon). Acropolis means "high city" in Greek.
<b><u>Capital</u></b>	The top part of a column.
<b><u>Doric order</u></b>	The style of the column capitals on the Parthenon exterior.
<b><u>Ionic order</u></b>	The style of the column capitals in the Treasury (interior, back room).
<b><u>Parthenon</u></b>	The main temple on the Athenian Acropolis, dedicated to the city's patron goddess, Athena. It was the last of many temples to Athena on the Acropolis.
<b><u>Pediment</u></b>	The triangular shape on the short side of a building.
<b><u>Pentelikon</u></b>	Mount Pentelikon is a mountain 10 miles northeast of Athens with marble used to make the Parthenon.
<b><u>Winch</u></b>	Machine used for pulling or hauling heavy loads, consisting of a rope coiled around one or more drums.

## Short Reading Assignment:

### "The Half-Finished Block"

Adapted from *The Stones of the Parthenon* by Dr. Manolis Korres

About 2,500 years ago, an old temple on the top of the Acropolis in Athens is undergoing major renovations. Giant scaffolding, like the scaffolding that you see all over Nashville today, is set up to create a much larger temple than the one before it.

For the first time ever in their city, the new temple will be made of marble. This new temple is the famous Athenian building known as "The Parthenon".

The marble quarry, where experienced and professional quarrymen work with stonecutters, foremen, and architects, is located on a nearby mountain called Mt. Pentelikon. Mt. Pentelikon is 10 miles away from the Acropolis. Ten miles is approximately the distance from Nashville, TN, to Brentwood, TN—which would take over 2.5 hours to walk at a steady pace.

So, how does marble stone in the ground get to its place on the Parthenon?

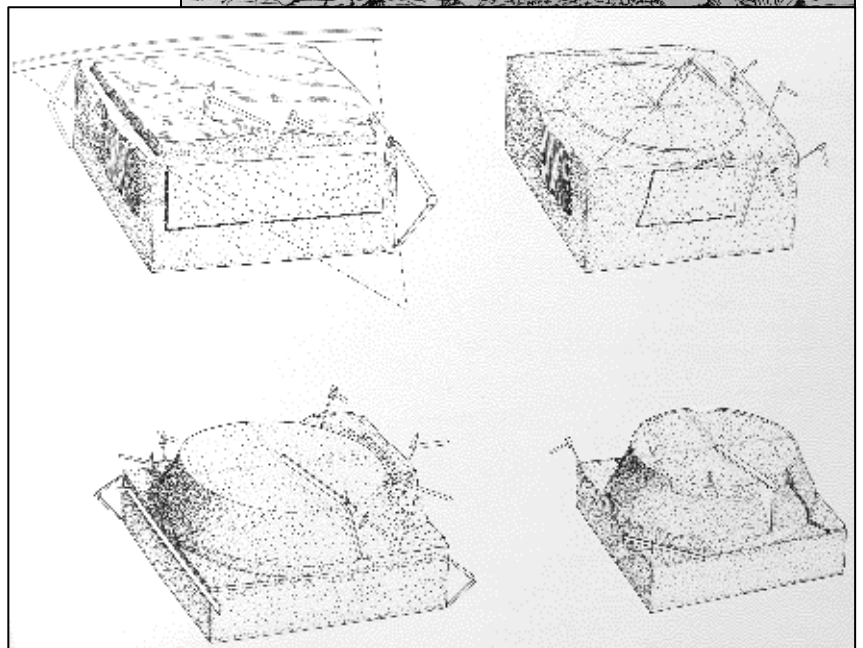
First, masons work to separate a large block of marble from the mountain. Simple machines such as iron wedges and long levers help split the stone block apart.

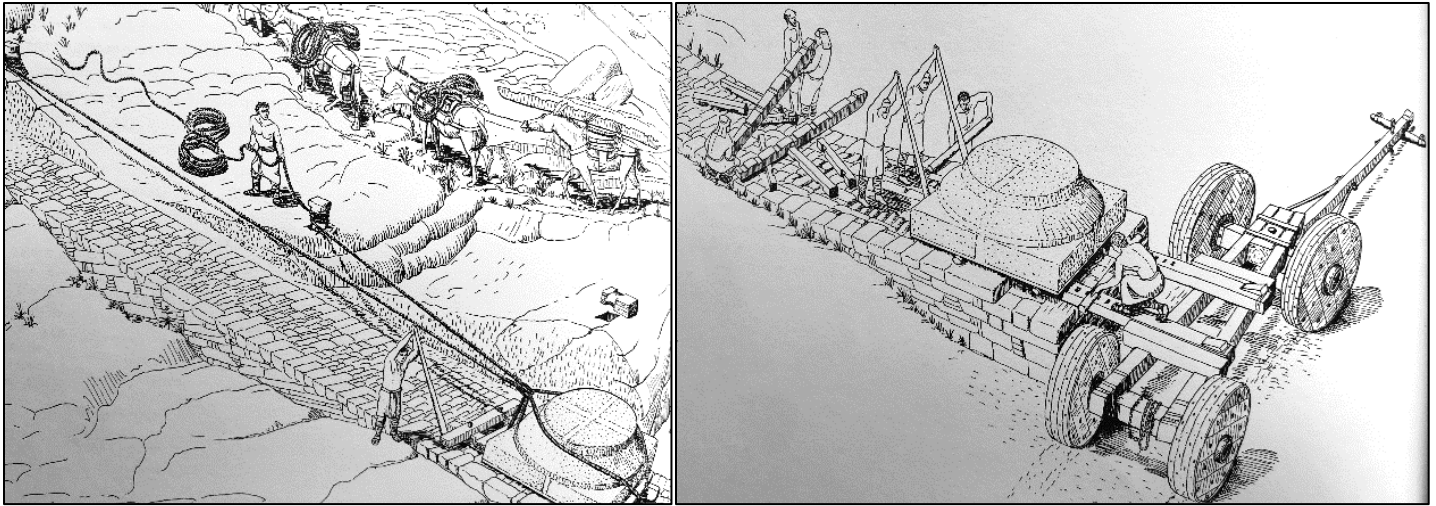
Then a master mason inspects the block to find weak points or cracks in the stone. The master mason directs workers on how to cut the best part of the block into the proper shape: a Doric column capital. For this, the mason needs create a large square block.

Large fragments separated away from cutting and carving the block are not wasted—they could be repurposed for a section of the pediment or other building parts.

After more smoothing and shaping, tools such as rulers, calipers, chisels, and various squares and angles complete more stages in forming the column capital.

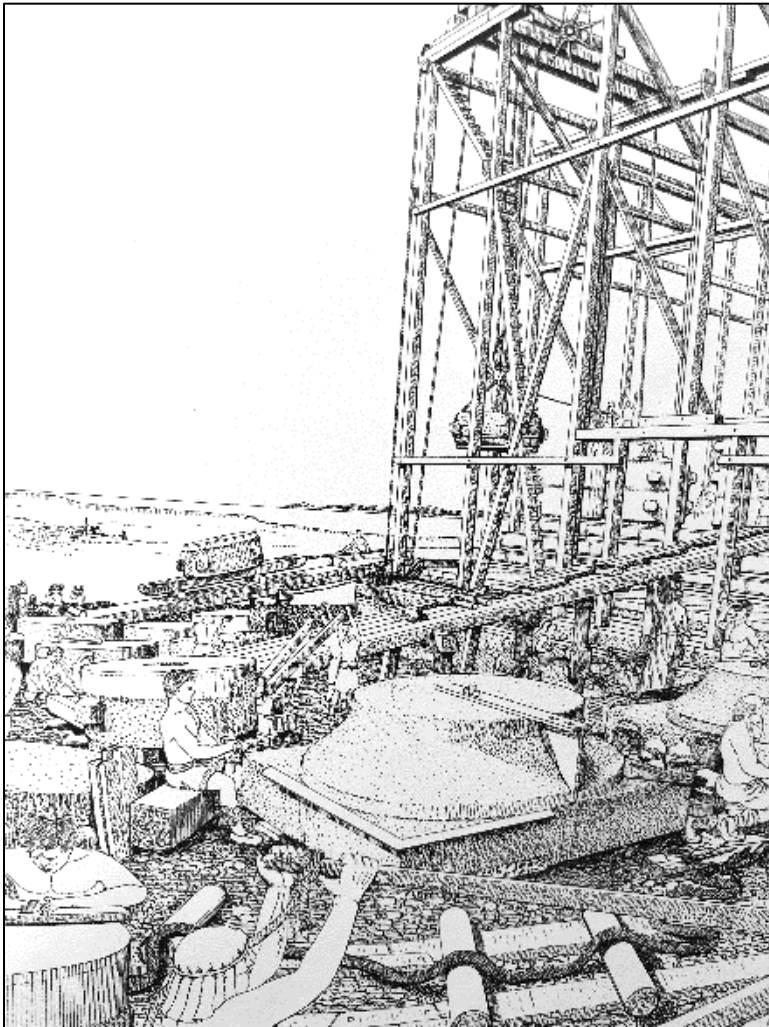
The goal is to whittle down the block into a "half-finished shape". This work could take about two months.





A wooden sled helps move the half-finished capital to a place where it can be safely lifted with ropes and a winch (a lifting device). The block then travels on a stone road down the mountain to a loading platform where it is transferred to a wagon.

Mules and drivers transport the half-finished column to the city, where fresh mules are harnessed up before the hill up to the top of the Acropolis. Pulleys help safely slide the sled with capital up the steepest and uppermost hill.



An architect inspects the piece for cracks while masons examine the dimensions, work that demands expert knowledge of geometry.

The architect learns that a crack was noted early in the column's cutting and spots the crack that was reported.

Hopefully most of the crack can be removed during the finishing of the Doric column capital and, if needed, the capital can be reinforced with iron clamps to strengthen it. But if the crack is too dangerous, it will not be used.

According to Dr. Manolis Korres, "The Parthenon, the most illustrious building ever erected by the [Athenian] state, and the greatest accomplishment in the technology of stone, is almost finished."

**Conclusion:**

You have just read a shorter, adapted version of a book by the famous Greek archaeologist Dr. Manolis Korres. His book is about how ancient Athenians brought stone from nearby mountains to the top of the Acropolis for use in building the Parthenon over 2,000 years ago. But the block that was featured in the story had a problem—a crack, or fissure. Dr. Korres calls the Parthenon “the greatest accomplishment in the technology of stone”. Do you think that ancient Athenian architects would complete that half-finished block to become one of the official Doric column capitals? Why or not?

Hint: There is no right or wrong answer.  
If you were the architect, what would you do?

**Source for adapted text, quotes, and all images:**

Korres, Manolis. *The Stones of the Parthenon*. J. Paul Getty Museum, 2000.