



**Geologic & Geographic Settings-**  
Foundation of Greek Culture & Civilization  
Dr. Alan Baharlou

# ➤ Ancient Civilizations

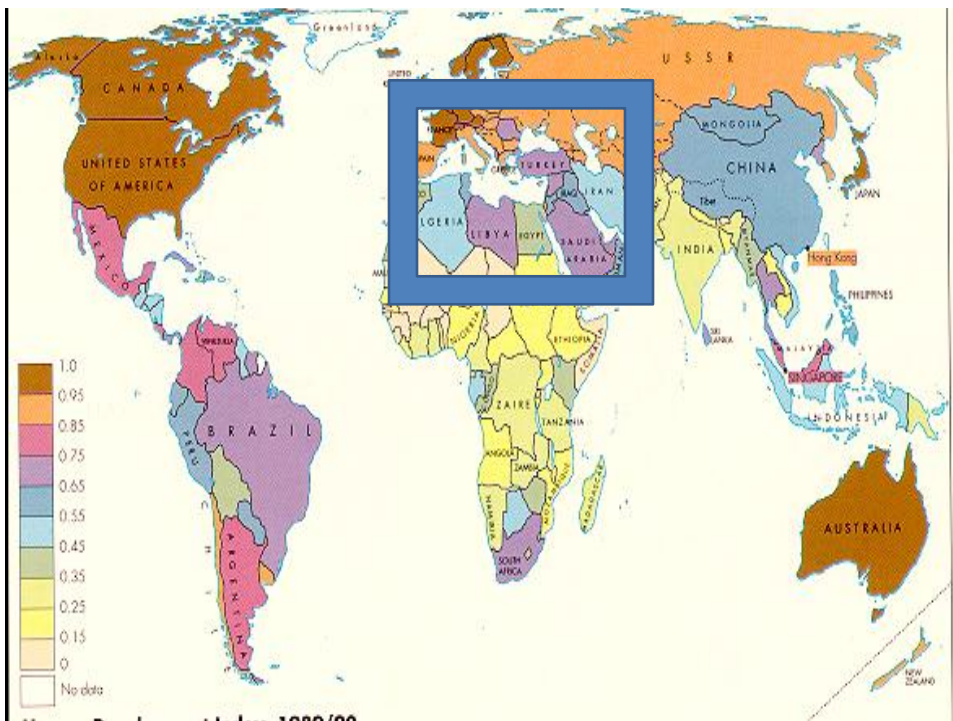
## ➤ GREEKS

## ➤ ROMANS

## ➤ PERSIANS

## ➤ EGYPTIANS

## ➤ MESOPATMIAN<sub>s</sub>



Greece, a country in southeastern Europe whose peninsula extends from the Balkans into the Mediterranean Sea, is mountainous, with many gulfs and bays. Forests fill some areas of Greece. Much of Greece is stony and suitable only for pasturage, but few other areas are suitable for growing wheat, barley, citrus, dates, and olives



The Greeks called their land *Hellas* and themselves *Hellenes*. It was the Romans who called them Greeks- (*Graeci*) and that is the name by which we know them.

The Greek historian Herodotus wrote that “*Egypt is the gift of the Nile*” but he never came up with an expression so memorable to describe his own country. Perhaps that was because the Greece he **knew was never a united nation with fixed geographical borders.**

Rather it was a collection of city-states (although town-state or even village-state would have been more accurate for few had the population to be called a city.) separated by their **topography**. These city-states were like a large family of quarrelsome brothers, almost always fighting with each other, but occasionally, banding together to battle against outsiders when they felt like doing so. Afterwards, they were as likely as not to turn on each other again. The Greeks have often been described as “independent-minded” and there seems no doubt that Geology & Geography played a major role in shaping that character. **It was natural forces;(i.e. mountains and the sea) that molded Greece and Greeks into what they were.**

## **Geology of Greece**

Greece was a shallow, oxygen rich sea during most of the (Mesozoic Period).

A continuous submerging allowed the formation of huge layers of limestone in the whole area. Then, during the Cretaceous, a big island appeared, which run from north to south, in the area between Thesaloniki and Athens. Here the layers were partly eroded, and today we find here many crystalline rocks and also most valuable resources of Greece, like coal, manganese or iron ore & silver.

## **Earthquakes in Greece**

Greece is one of the world's most seismically active region. Fortunately, most Greek earthquakes are relatively mild but there is always the potential for more severe seismic activity. Greek builders are aware of this and Modern Greek buildings are built to be safe during earthquakes.

With the Alpine Orogeny,( formation of the Alps west of greece), the limestone was lifted all over the country and folded. So today about two thirds of the area of Greece is covered with limestone. Caves are very common, as many other karst phenomena





Matterhorn-14691.6 ft. highest peak of Alps

Most of Crete, Greece, and the Greek islands are contained in a "box" of **fault lines** running in different directions. This is in addition to the earthquake potential from the still-lively volcanoes, including the Nysiros Volcano, thought by some experts to be overdue for a major eruption.

#### **Undersea Earthquakes**

Many of the quakes that strike Greece have their epicenters under the sea. While these can shake up surrounding islands, they rarely cause severe damage.

The ancient Greeks attributed earthquakes to the God of the Sea, **Poseidon**, perhaps because so many of them were centered under the waters

#### **The Athens Earthquake of 1999**

One severe quake was the Athens Earthquake of 1999, which struck just outside of Athens itself. The suburbs where it struck were among Athens' poorest, with many old buildings. **Over a hundred buildings collapsed, more than 100 people were killed, and many others were injured or left homeless**

Folded Rocks



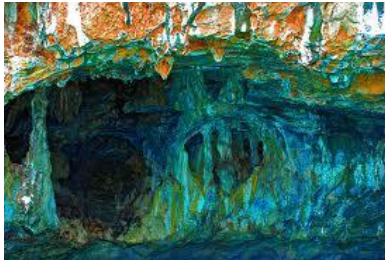
Limestone Caves with stalactites and stalagmites



Diros Cave at Areopoli



Perama Cave



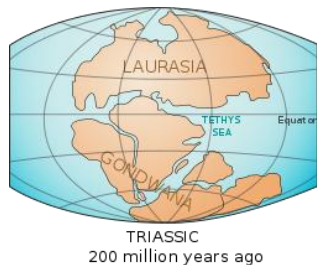
cliff-carved **cave** temples from ancient Greece

Experts have ranked it among the ten most remarkable **caves**

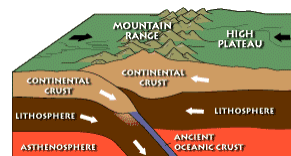


Blue **Caves**  
Zakynthos  
Island **Greece**.

The whole Mediterranean area is an active, converging plate rim, where the **African** and the **European Plate** collide. Still, most of the action happens in Italy, with ongoing volcanism. In Greece, there is little volcanism, but sometimes heavy earthquakes and now and then some thermal springs.



First phase of the Tethys Ocean's forming: the (first) Tethys Sea starts dividing [Pangaea](#) into two supercontinents, [Laurasia](#) and [Gondwana](#). What was once the Tethys Sea has become the [Mediterranean Sea](#). 'Tethys Sea' is named after the [Greek](#) sea goddess [Tethys](#). We can see similar geologic evidence in the [Alpine orogeny](#) of [Europe](#), where the movement of the [African plate](#) raised the [Alps](#). One of the most striking events in the Mesozoic Era was the rise to dominance of dinosaurs in terrestrial ecosystems. The Mesozoic lasted from **245 to 65** million years ago, and is divided into three periods. The Mesozoic, which derives its name from the Greek with a rough meaning of middle animals, One of the most striking events in the Mesozoic Era was the rise to dominance of dinosaurs in terrestrial ecosystems





Greece is so called a **shredded** landform, due to folding, and faulting and erosion,





With its 9570 in height, **Mount Olympus** is Greece's highest mountain.





Mountains in Greece don't soar to the heights of other mountain ranges such as the Andes, Rockies, Alps or Himalayas-but they are extensive. In fact, about 80% of Greece is covered with mountains with the result that most settlements were less than 10 miles from a mountain. These mountain ranges isolated regions from each other more effectively than fences because what they lack in height they make up with steepness and ruggedness preventing or discouraging overland travel and communications.

No matter where people settled in Greece, they were rarely more than 50 miles from the sea. The philosopher Plato noted that the Greeks lived around the sea “like frogs around a pond.” A deeply indented coastline held between its rocky fingers a sea that could vary from tranquil to turbulent depending on the season and the weather. Most Greek mariners had experienced firsthand the sea's treacherous currents and diabolical whirlpools.



Mediterranean Sea **has little plankton** (that's why its waters are so clear), which means that it doesn't support the extent and variety of sea life seen elsewhere but certainly enough to be both an important and welcome source of food.

**Surrounded by water, the Greeks nevertheless faced a shortage of fresh water.** Compared to many countries, there is a real scarcity of rivers and these often dry up to a trickle in the hot summer months. (Summer temperatures, because of the cloudless skies, are often hotter than in the Tropics.) **The lack of rivers is offset somewhat by a plentiful supply of fresh water springs.** These were precious and life giving and it is not surprising that they were considered **to be sacred sites managed by Poseidon.**

## **Athens**



The site of Athens has been inhabited for approximately **8000 years**, and from at least the beginning of Mycenaean times, around **1600 BC**, it has been one of the greatest cities of Greece.

Athens possessed Cyclopean (made of big rocks) walls, a monumental entrance, a postern gate, a royal palace, and a secret water-supply.

**Athenian pottery was the best in Greece and was widely exported for some 700 years.** Another source of wealth was the **silver** from the mines at Lavrion, especially from about 500 BC

The Athens basin contains a number of different Neogene sedimentary rocks originally formed in shallow lakes, such as limestones, marls and **clays**. **The clay deposits were the basis of the ancient Athenian pottery industry, and are still exploited today**

#### Greece Climate - Weather

Greece has a Mediterranean climate with plenty of sunshine, mild temperatures and a limited amount of rainfall. Due to the country's geographical position, its rugged relief and its distribution between the mainland and the sea, there is great variation in Greece's climate.



**Olympia**, home of original Olympic Games, and Mount Olympus, home of **Zeus and the other Olympian gods** .



The highest peak is [Mount Olympus](#) at 9,570 feet (2,916.9 m) tall and the home to the Gods of Greek . Mount Olympus has 52 peaks and most worshipped mountain of Greece. A magnificent place with numerous forests and gorges and summits of different heights, blessed with mild climate, and surrounded by [Uranus](#), the heaven. It never rained on Mount Olympus nor was it ever windy, only some clouds were appearing from time to time to isolate the God's kingdom from the outside world and bless the world with water.



The favor of the deities gave the mountain an honored place in Classical Greek culture and that mythical status has been passed down through the centuries, across Western & many Eastern civilizations.



**Pantheon** The mountain's highest peak, **Mytikas**, tops out at 9,573 feet (2,918 meters). The ancients called Mytikas "Pantheon" and believed it was the meeting place of the deities. The 12 gods were believed to have lived in the alpine ravines, which Homer described as the mountain's "**mysterious folds**."

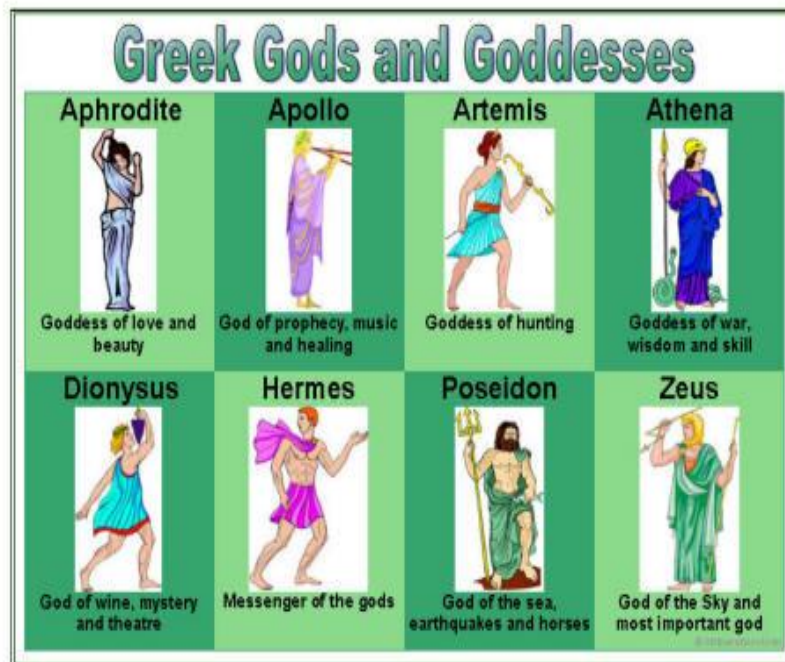


**Responsible for various Natural Forces**





The Olympian gods ("Theoi Olympioi") presided over every facet of ancient life and were often grouped according to their common functions





**Zeus  
king  
of  
all  
the  
gods.**



Aphrodite



It was named  
for the Greek  
god of the sea,  
[Poseidon](#)



[Demeter Goddess](#)

**Zeus**



Zeus

<b>Greek Name</b>	<b>Roman Name</b>
Zeus	Jupiter
Hera	Juno
Poseidon	Neptune
Dionysus	Bacchus
Apollo	Apollo
Artemis	Diana
Hermes	Mercury
Athena	Minerva
Ares	Mars
Aphrodite	Venus
Hephaestus	Vulcan
Demeter	Ceres
Hades	Pluto
Hestia	Vesta
Eros	Cupid



**Parthenon**

**Greek Mythology for the most part, with some modifications, was followed by all ancient civilizations. The most creatives were the Mesopotamians**



**Jerusalem-The Holy sites of Judaism, Christianity & Islam**





**Mosque of Omar**



**Church of Ascension**

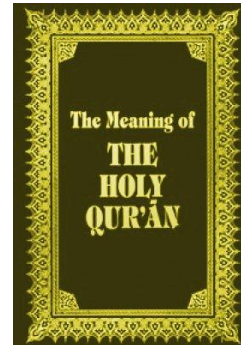
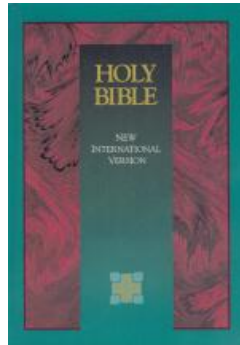


**Western Wall**

The roots of Judaism date back to around 2000 B.C., when [Abraham](#) refused to worship the idols, which were common during that period. He is considered by Jews to be the first to believe in a single god. Judaism in its more organized form has begun with [Moses](#), who is believed to have received the Ten Commandments from God on Mt. Sinai after the Israelites' Exodus from Egypt, around 1500 B.C. In the Bible, Abraham was called the first Hebrew. Judaism, believing only in one God, tracing its beginnings back to Abraham, when nearly 2,000 years ago when God chose Abram to be his special servant.



**TORAH**



**SISTINE CHAPEL  
FRESCOES  
IN VATICAN.**

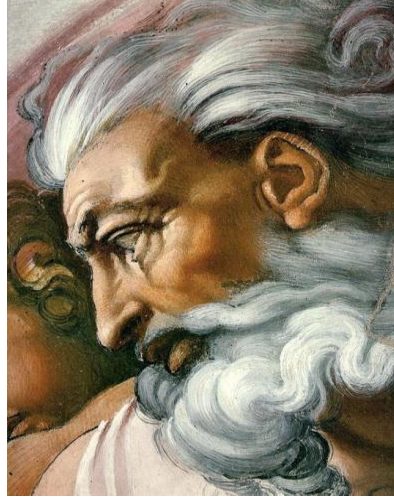
**MICHELANGELO  
WAS COMMISSI-  
-ONED BY POP  
JULIUS II TO  
PAINT THE  
GENESIS STORY  
ON THE CHPEL  
CEILING BET-  
WEEN 1505-1512**



**MICHEL-  
-ANGELO  
BUONARROTI  
(1475-1564)**







**The face of God, from the Creation of Adam**



**Separation of Land from Water**

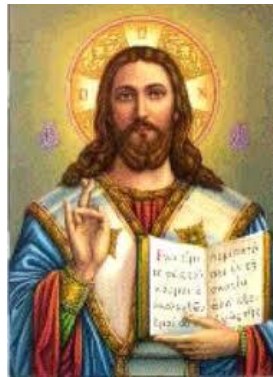




## Sistine Chapel-Flood of Noah-Big Flood



Profit Moses founder of Judaism on the Mount Sinai receiving the 10 Commandments



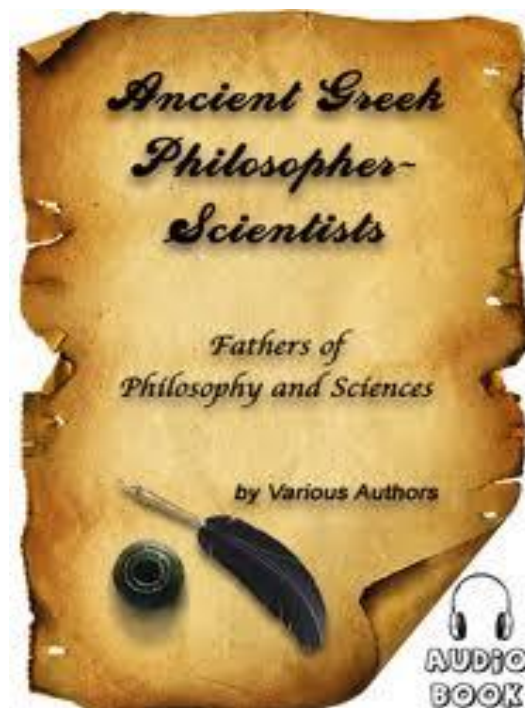
Profit Jesus Christ was founder of Christianity, born in Bethlehem

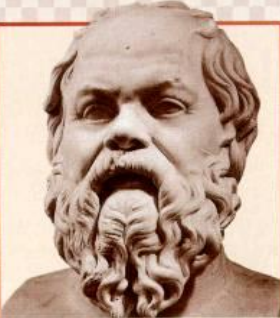
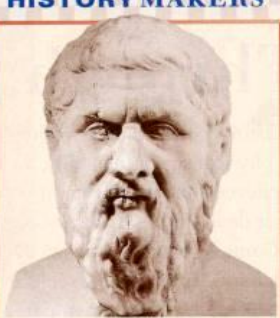
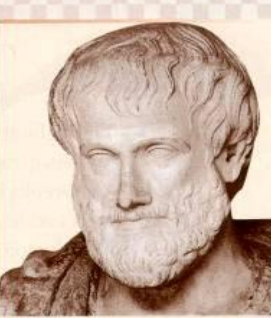


Profit Muhammad founder of Islam

**Greek's Philosophers (Truth-seekers, Thinkers, theorists).**

**The Philosophers of the five Ancient Civilizations, for the most part established fundamentals of Science & Technology- Renaissance & Industrial Revolution.**



HISTORY MAKERS		
		
<p><b>Socrates</b> 469–399 B.C.</p> <p>Socrates was one of the most powerful thinkers in history. He encouraged his students to examine their beliefs. Socrates asked them a series of leading questions to show that people hold many contradictory opinions. This method of teaching by a question-and-answer approach is known as the <i>Socratic method</i>. He devoted his life to gaining self-knowledge and once wrote, "There is only one good, knowledge; and one evil, ignorance."</p>	<p><b>Plato</b> 427–347 B.C.</p> <p>Born into a wealthy Athenian family, Plato had careers as a wrestler and a poet before he became a philosopher. He studied with Socrates. After his teacher died in 399 B.C., Plato left Greece and traveled to North Africa and Italy. He later returned to Athens and founded a school called The Academy in 387 B.C. The school lasted for approximately 900 years. It was Plato who once stated, "Philosophy begins in wonder."</p>	<p><b>Aristotle</b> 384–322 B.C.</p> <p>Aristotle, the son of a physician, was one of the brightest students at Plato's academy. He came there as a young man and stayed for 20 years until Plato's death. In 335 B.C., Aristotle opened his own school in Athens called the Lyceum. The school eventually rivaled the Academy. Aristotle once argued, "He who studies how things originated and came into being . . . will achieve the clearest view of them."</p>



**Thales**



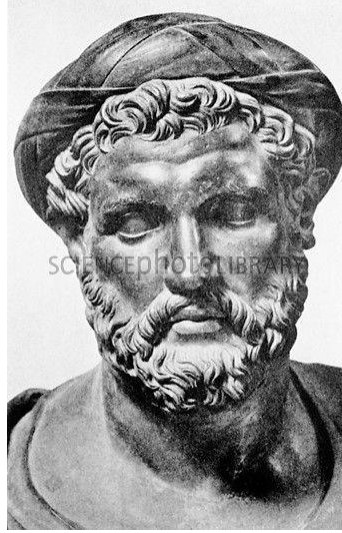
**Heraclitus**



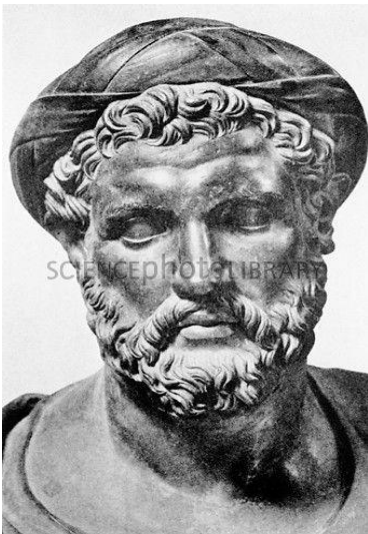
**Theophrastus**



**Pliny**



**Pythagoras,**



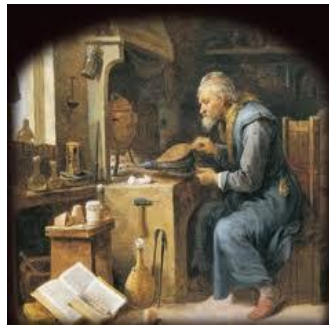
Pythagoras. (about 582-497 B.C.), Greek philosopher. Pythagoras tried to describe the universe in terms of numbers. He found that there is no whole fraction or rational number that is the square root of 2. He taught the Pythagorean theorem:-

He taught that the Earth is spherical, that all heavenly bodies did not move uniformly and that the morning and evening stars are the same object





**Democritus**



**Alchemists**