

Layers of Learning

Year One - Unit Four

Includes fun, hands-on projects in
History - Geography - Science - The Arts



Ancient Greece - Wonders of the World - Satellites - Greek Art

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LAYERS OF LEARNING

YEAR ONE • UNIT FOUR

ANCIENT GREECE

WONDERS OF THE WORLD

SATELLITES

GREEK ART

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LAYERS OF LEARNING INTRODUCTION

This is part of a series of units in the Layers of Learning homeschool curriculum, including the subjects of history, geography, science, and the arts. Children from 1st through 12th can participate in the same curriculum at the same time - family school style.

The units are intended to be used in order as the basis of a complete curriculum (once you add in a systematic math, reading, and writing program). You begin with Year 1 Unit 1 no matter what ages your children are. Spend about 2 weeks on each unit. You pick and choose the activities within the unit that appeal to you and read the books from the book list that are available to you or find others on the same topic from your library. We highly recommend that you use the timeline in every history section as the backbone. Then flesh out your learning with reading and activities that highlight the topics you think are the most important.

Alternatively, you can use the units as activity ideas to supplement another curriculum in any order you wish. You can still use them with all ages of children at the same time.

When you've finished with Year One, move on to Year Two, Year Three, and Year Four. Then begin again with Year One and work your way through the years again. Now your children will be older, reading more involved books, and writing more in depth. When you have completed the sequence for the second time, you start again on it for the third and final time. If your student began with Layers of Learning in 1st grade and stayed with it all the way through she would go through the four year rotation three times, firmly cementing the information in her mind in ever increasing depth. At each level you should expect increasing amounts of outside reading and writing. High schoolers in particular should be reading extensively, and if possible, participating in discussion groups.

😊 😊 😊 These icons will guide you in spotting activities and books that are appropriate for the age of child you are working with. But if you think an activity is too juvenile or too difficult for your kids, adjust accordingly. The icons are not there as rules, just guides.

😊 GRADES 1-4

😊 GRADES 5-8

😊 GRADES 9-12

Within each unit we share:

- EXPLORATIONS, activities relating to the topic;
- EXPERIMENTS, usually associated with science topics;
- EXPEDITIONS, field trips;
- EXPLANATIONS, teacher helps or educational philosophies.

In the sidebars we also include Additional Layers, Famous Folks, Fabulous Facts, On the Web, and other extra related topics that can take you off on tangents, exploring the world and your interests with a bit more freedom. The curriculum will always be there to pull you back on track when you're ready.

You can learn more about how to use this curriculum at www.layers-of-learning.com/layers-of-learning-program/

UNIT FOUR

ANCIENT GREECE – WONDERS OF THE WORLD– SATELLITES – GREEK ART

To know where you are, you've got to know where you've been; there must be a couple of drops of blood in every one of us that are there because of the French Revolution, and another one or two because the Greeks fought at Marathon, and some because of Lincoln.

-Arthur Miller

	LIBRARY LIST:
HISTORY	<p>Search for: Ancient Greece, Greek Civilization, Mythology, Classical Mythology, Greek Literature, Socrates, Alexander the Great, Aristotle</p> <p>☺ ☺ <u>Ancient Greece: An Interactive History Adventure</u> by William Caper. A historical “choose your own adventure” story. Highly recommended for middle grades or read aloud for younger kids.</p> <p>☺ ☺ <u>Book of Greek Myths</u> by Edgar and Ingri D'Aulaire. Read aloud to younger kids or let older kids read on their own.</p> <p>☺ <u>The Greek News</u> by Anton Powell. Laid out like a newspaper and packed with information.</p> <p>☺ <u>Black Ships Before Troy: the Story of the Iliad</u> by Rosemary Sutcliff. A beautiful retelling with great illustrations.</p> <p>☺ <u>The Wanderings of Odysseus: A Retelling of the Odyssey</u> by Rosemary Sutcliff.</p> <p>☺ <u>The Children's Homer: The Adventures of Odysseus and the Tale of Troy</u> by Padraic Colum.</p> <p>☺ <u>Greek Gods and Goddesses</u> by Geraldine McCaughrean.</p> <p>☺ <u>The Iliad</u> and <u>The Odyssey</u> by Homer. Read the original.</p> <p>☺ <u>The Republic</u> and <u>Symposium</u> by Plato. Philosophy starring Socrates.</p> <p>☺ <u>On Poetics</u> and <u>Ethics</u> by Aristotle. Philosophy, short and accessible.</p> <p>☺ <u>Oedipus Rex</u> by Sophocles. Every high schooler should read at least one of Sophocles' plays.</p> <p>☺ <u>History of the Persian Wars</u> and <u>History of the Peloponnesian Wars</u> by Herodotus. The first historical works. The Histories are often sold together, we like the Penguin translation. Easy to read with entertaining anecdotes.</p> <p>☺ <u>The Persian Expedition</u> by Xenophon (Penguin Edition). An army of Greek mercenaries fought the Persian king to bring the usurper Cyrus to the throne. When the attack failed the Greek troops were stranded thousands of miles from home in hostile territory. This is the first hand account of their journey home.</p> <p>☺ <u>A Day in Old Athens</u> by William S. Davis. A history for high school and adults.</p>

ANCIENT GREECE – WONDERS OF THE WORLD– SATELLITES – GREEK ART

GEOGRAPHY	<p>Search for: wonders of the world, seven wonders, modern wonders, natural wonders, specific names of wonders</p> <ul style="list-style-type: none"> 🟢 <u>Wonders of the World</u> by Phillip Steele. From Kingfisher, this book covers the ancient wonders and many modern ones, but only man-made wonders. 🟢 <u>Great Wonders of the World</u> by Russell Ash. From DK, this book is filled with amazing pictures of the wonders of the world, ancient, modern and natural. 🟢 <u>The Great Pyramid Robbery</u> by Katherine Roberts. First in a series of seven fictional adventures surrounding each of the ancient wonders. 🟡 🟢 <u>A World of Wonders</u> by J. Patrick Lewis. This book of geographical poetry doesn't exactly fit in this section, but we had to include it somewhere because it's so fun and so full of many different curious geographical facts all told in verse.
SCIENCE	<p>Search for: asteroids, comets, meteors, satellites</p> <ul style="list-style-type: none"> 🟡 🟢 <u>The Comet and You</u> by E.C. Krupp. This picture book about comets is full of incredibly charming black and white pictures. It is written in a kid-friendly, conversational way, but is packed with information about comets, how they are formed, how we see them, and so much more. Before I read it, I couldn't have told you how many hot dogs you'd have to line up to go around the orbital path of Halley's Comet. (72 trillion!) 🟡 🟢 <u>Bill Nye the Science Guy: Comets and Meteors</u> video. 🟢 <u>Asteroids</u> by Isaac Asimov. 🟢 <u>Comets and Meteors</u> by Isaac Asimov. 🟣 <u>Dialogues Concerning Two New Sciences</u> by Galileo.
THE ARTS	<p>Search for: classical art, Greek art, ancient architecture, Greek theater</p> <ul style="list-style-type: none"> 🟢 <u>Ancient Greek Art</u> by Susie Hodge. Very thorough coverage of Greek art topics in a kid friendly format. 🟢 <u>Ancient Greeks: Builders, Craftsmen, and Tradesmen</u> by Jane Shuter. Explores the area of pottery making, and architecture along with other topics. 🟡 🟢 <u>Greek Theater</u> by Stewart Ross. Takes you on a imaginary tour of the production of Oedipus the King. 🟡 🟢 <u>The Parthenon</u> by Elizabeth Mann. While the book centers around the Parthenon in Athens, the author teaches about all aspects of Greek life through this one amazing building. 🟢 🟣 <u>Ancient Greek Monuments to Make</u> by Stephen Savage. A paper model of two famous Greek buildings from Athens. 🟢 🟣 <u>Greek and Roman Theater</u> by Don Nardo. Great overview of what the theaters were like and what sorts of plays were produced in them. 🟣 <u>Greek Art</u> by John Boardman. A complete overview of Greek art, used in college courses.

HISTORY: ANCIENT GREECE

Fabulous Fact



Mount Olympus is the highest mountain in Greece. Anciently it was known as the home of the gods. This highest peak is nicknamed *Seat of Zeus*.

Famous Folks



Epiminides was reportedly one of the wisest men to ever live. He was quoted twice in the Bible (Acts 17:28 and Titus 1:12), but attributed only as “the poet.” He was said to have wandered into the cave of Zeus where he slept for fifty-seven years. He awoke a philosopher.

Learn more about him and the fantastical stories that surround him.

The Greek peninsula and the thousands of islands surrounding it became part of a somewhat cohesive culture, though it never was a cohesive nation until Alexander the Great. What we think of as ancient Greece was really a loose collection of city-states. They had their basic religious beliefs, language and ethnicity in common, and they had the works of Homer. The things the Greeks thought and believed and wrote about are still an important part of western culture today. Greek mythology, customs, and even language pop up all the time in our culture and most of the time we don't even know it.



*A bard is reciting Homer in a public area near the sea in a Greek city.
Painting by Lawrence Alma-Tadema (1885)*

Here's how it happened. The Greeks were the most learned people of their time and they wrote down everything they learned. What's more, their language was preserved through the millennia while the languages of most other ancient people were lost. When the Romans conquered the Greeks the Romans adopted the much more developed Greek culture and religion, including Greek customs, art, and education. That's why we see so many parallels between ancient Greece and Rome. The wealthy Roman families all hired a Greek tutor for their sons, and so the Greek culture was preserved and never became buried like most ancient peoples until Rome itself was conquered. Then it lay dormant, hidden under the earth and in obscure libraries until the Renaissance of Italy. Young Renaissance men and women began to dig up the artifacts and study the ancient Greeks. Classical learning was rediscovered and the ideas of the Renaissance were passed all through Europe and came across the sea with the ancestors of North Americans. That is how the Greeks are still so much a part of our culture today.

ANCIENT GREECE – WONDERS OF THE WORLD– SATELLITES – GREEK ART

🌞 🌱 🌍 EXPLORATION: The Greek World Map

At the end of this unit you will find a map of the Greek World to print and color. Greece was never a single nation or empire. This map shows all the many separate Greek city-states. Color them all different colors. Some of the major Greek cities are on the map too. Do you recognize their names?



🌞 🌱 🌍 EXPLORATION: Timeline

You will find printable timeline squares at the end of this unit to cut apart and place on a wall timeline or in a book timeline.

- 1450 BC Myceneans conquer Crete and expand
- 800's BC First city state founded on Peloponnesian Peninsula
- 776 BC First pan-Hellenic Olympic festival
- 733 BC Beginning of Greek colonization of the Mediterranean
- 650's BC Rise of tyrants in many Greek city states
- 594 BC Athenian Constitution reformed
- 540's Persians conquer Ionia (eastern Greek islands)
- 490 BC Battle of Marathon, Greek victory
- 480 BC Battle of Salamis, Greeks beat Persians
- 478 BC Delian League begins; forming a military treaty between Greek city-states with Athens at the head.
- 448 BC Construction of the Parthenon begins

Famous Folks

Some interesting people to include in your study of Greece are:

Socrates
Pythagoras
Plato
Sophocles
Aristotle
Alexander the Great

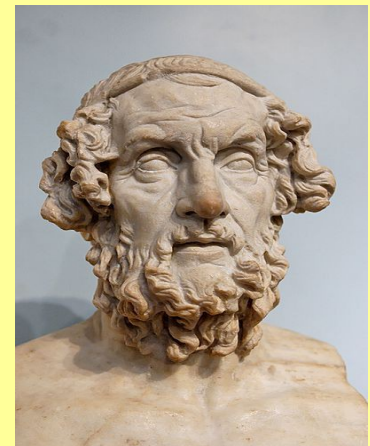
Additional Layer

The Greeks had colonies all over the Mediterranean too, including the Black Sea, the North Coast of Africa, Italy, Sicily, Spain, and Egypt. They were great traders and great sailors.

There is a map at the end of this unit of the Greek colonies to color too.

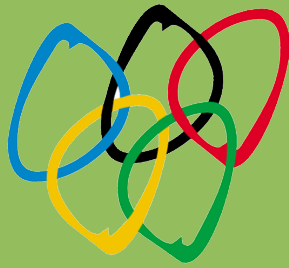
Famous Folks

Legend tells us that Homer was a blind bard and poet who composed the Iliad and the Odyssey, though it was purely an oral tale, not written down until centuries later.



ANCIENT GREECE – WONDERS OF THE WORLD– SATELLITES – GREEK ART

Writer's Workshop



Although the modern day Olympics have changed quite a bit from the days of ancient Greece, it is still a tradition we maintain. Athletes from countries around the world come together to compete in athletic events. There are amazing stories of triumph, sadness, and strong will among modern-day Olympians. Choose an Olympic athlete and find out about him/her. Write a biography about the athlete's life, story, and quest to become an Olympian.

Additional Layer



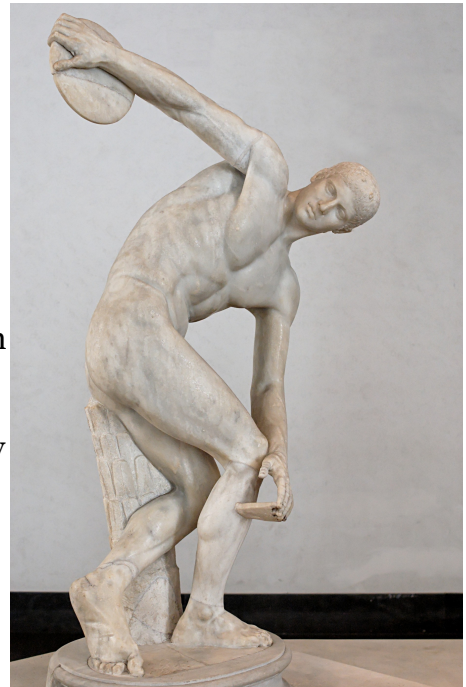
Odysseus on the island of the Lotus Eaters. The Lotus flower was a narcotic and when eaten it made Odysseus stop caring about going home.

- 431-404 BC Peloponnesian Wars: Athens vs. Sparta; Athens loses
- 371 BC Sparta declines leaving Thebes the strongest of the Greek cities
- 337 BC Philip of Macedon invades Greece
- 334 BC Alexander the Great begins his invasion of the Near East
- 323 BC Alexander dies of fever, leaving the empire to his three generals.

🌞 🌱 🌿 EXPLORATION: Olympic Games

The tradition of the Olympic Games began in ancient Greece, though we know little about the exact beginning because of the many myths surrounding its origins. It was said that the games actually began as a competition between the Olympian gods before being adopted as a competition between people. To qualify, men had to be young, speak Greek, and vow before the statue of Zeus that they had trained for at least 10 months. They could then compete in the events.

Hold your own Olympic Games. You could have a foot race, discus throw (frisbee), wrestling match, long jump, javelin throw (a broomstick works well), or hoplite race. In the hoplite race men had to race dressed in full armor. You can use snow clothes (or just really large clothing) for your version. On “go,” each person must quickly dress in their full garb, then race around a course and across the finish line. Award all your winners with leaf garlands for their heads. Garlands can be made with real or artificial greenery and some floral tape.



This statue depicts an ancient Olympic discus thrower.

🌞 🌱 🌿 EXPLORATION: The Odyssey of Puppets

Pick one of the adventures of Odysseus as he made his way home. Create paper bag puppets for the characters and act out the story with your puppets.

- Odysseus and the Cyclops
- Odysseus and the Sirens

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- Odysseus and Circe
- Odysseys and the Trojan Horse
- Odysseus and the Lotus Eaters
- Odysseus and the Island of the Cannibal Eaters
- Odysseus in Hades
- Odysseus, Charybdis, and Scylla
- Odysseus and Calypso
- Odysseus comes home to Ithaca

😊 😊 **EXPLORATION: Chariots**

The Romans were famous for their chariots because they were so light and fast, but the Greeks were actually the first to race them. They were pulled by mules or oxen. They were often used as battle vehicles.

Use clay to create a simple chariot with two wheels. A drinking straw makes the perfect axle if you want your wheels to turn. Find (or sculpt) a small toy figure to ride in your chariot.

😊 😊 😊 **EXPLORATION: Trojan Horse**

According to the famous tale, the prince of Troy, Paris, and the queen of Mycenae, Helen, fell in love. Paris took Helen to the city of Troy, angering the Mycenaean king and his people. They attacked Troy and kept it under siege for ten years. They needed a new strategy, so they played a trick on the people of Troy. They built a giant wooden horse and left it outside the city, pretending to sail away in retreat. When the people of Troy wheeled the horse inside the city, they got quite a surprise. Some of the Mycenaean soldiers were inside it! The soldiers came out, opened the gates of the city, and soon the whole Mycenaean army was inside the walls of the city!

Build your own Trojan horse using a small milk carton. Cover it with craft sticks for wood siding. Use some cereal box cardboard to shape the horse's head, and use milk caps for wheels. Don't forget to cut a small door in it so some toy soldiers can climb inside to hide.

😊 😊 **EXPLORATION: Minoans**

The Minoan civilization predated the Greeks. The Minoans lived on the island of Crete, just south of the Greek mainland. They were probably an early settlement of Phoenicians. From Crete they spread north to mainland Greece. Eventually the classical

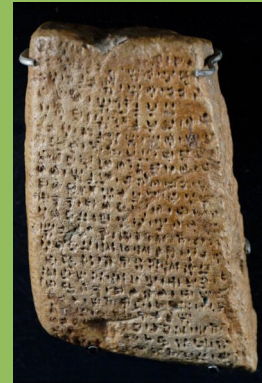


One of the oldest statues still existing, the Charioteer of Delphi, shows the outfit a Greek chariot driver wore.

Fabulous Fact

Because the chariot drivers needed to be light, but tall and strong, the drivers were often teenagers.

The sport affected not only the betting rings and spectators, but all of politics. Eventually it became controlled by governments to cut down on the bloodshed outside the ring.



Tablet inscribed with Minoan characters.

Famous Folks

The Minoan civilization was first uncovered by archaeologist Arthur Evans. But in spite of his interesting finds Evans is boring. He had a step mother, but she wasn't evil. He never had a falling out with any of his relatives. He didn't even have the grace to have any odd eccentricities.

No, if you want drama, you'll have to go learn about his colleague Heinrich Schliemann.

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Famous Folks



Zeus, Poseidon, and Hades, the three main gods of the Greek Pantheon. The Pantheon includes the twelve main gods and goddesses of the Greek world.

Additional Layer

It appears that the Minoans worshiped only female deities and their religious officials were all female as well. We can't be sure though because we are only guessing from the pictures and statues. We still haven't learned to read their writing, though we've found plenty of inscriptions and records.

Learn more about how scholars go about learning a completely foreign language without any clues. . . and you thought Spanish class was hard!

Famous Folks

Gorgo of Sparta was heir to a king and her father's counselor from childhood. She is one of the wisest of the ancients.

Greeks adopted some of their customs.

Volcanoes and earthquakes played a big role in the civilization of Crete. They must have had tremors often, but every once in a while a really big quake or eruption would come along and level whole cities. We can still see the evidence today. But the Minoans just kept rebuilding their cities and palaces on top of the rubble.

Make a big palace from blocks. Then knock it down like an earthquake just came through. Modern archaeologists believe that one of these quakes contributed to the demise of the Minoans, probably with some help from their greedy neighbors.

😊 😊 EXPLORATION: Bull Leapers

We have football, but the Minoans of Crete had bull leaping. Athletes did leaps and acrobatics over real live bulls who were charging at them. Bulls were sacred to the Minoans, so this may have been partly sport and partly religious ritual. There are many, many depictions of acrobats leaping, somersaulting, and vaulting over bulls.

Gather as many pillows and cushions as you can from your house. Make a giant pile to be your bull. Now practice doing leaps and tricks over your bull!

😊 😊 😊 EXPLORATION: Greek Myths

Gather several good versions of Greek myths to read aloud. *Book of Greek Myths* by Edgar and Ingri D'Aulaire is an excellent choice. Greek mythology is packed with exciting adventure stories of heroes and gods. After reading several, let your kids decide on one they'd like to do a project on. They could make a Medusa headband using pipe cleaners, rewrite the end of one of the myths so it comes out differently, or create a character sketch of their favorite hero.

😊 😊 EXPLORATION: The Maze and the Minotaur

In Greek mythology, the minotaur was a part man and part bull. It had the body of a man, but the head and tail of a bull. He lived in a maze called a labyrinth, and was brutal. There are many references to the minotaur, how he came to be, and how he ended up as a killing machine inside a maze in Greek mythology. Read the story of Theseus and how he finally defeated the minotaur.

Make your own maze. Use tables, chairs, cushions, pillows, and blankets. If possible, dim the lights or tie on a blindfold to make the maze even more challenging.

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Now you need your supplies-- a magic sword (a toy sword or stick will do) and a ball of string. Now send someone brave to be Theseus in the maze. Roll out string behind you as you go so you'll be able to find your way back out. Watch out! You may encounter the Minotaur. . . (have someone hide somewhere in the maze to surprise your "Theseus" as the minotaur!)



Slavery

Nearly every Greek citizen owned at least one slave. Slaves were captured in war, or at sea by pirates and sold internationally. A slave was owned body and soul by his master, with only a few legal rights. The children of a slave mother were slaves themselves.

☺ ☹ **EXPLORATION: Myceneans**

The Myceneans came after the Minoans and before the Greeks. They probably invaded Crete when the Minoans became internally unstable. The love of gold may very well have begun with these people. They made everything they could from gold and used the pretty yellow metal to decorate all their valuables. One of the most famous gold pieces was a burial mask of a king. It was found by archeologist Heinrich Schliemann, who thought it was the mask of King Agamemnon of Iliad fame.



Dark Ages

The Greeks had a dark age, just like Europe did later. A dark age is a period of time when, because of social disruptions, technology and learning are set back. People lose their literacy, few written records are made, if any, and poverty is the rule. The Greek Dark Age took place between Homer and the wars with Persia.

Make your own gold mask. Make a paper mache mask of your face with a partner. Coat your face with petroleum jelly before applying the paper mache strips and it will come off more easily when you remove it. Be careful to leave air holes for the mouth and nose so you can breathe. Once you get it shaped, take it off your face and lay it out to dry. Once it is completely dry, lightly smooth and sand it. Then paint it with metallic paint in gold.

☺ ☹ ☹ **EXPLORATION: Greek Feast**

Have a Greek feast! Eat fish, grapes, olives, fresh vegetables, plums, and bread drizzled with olive oil or honey. You could also make some hummus to go along with your feast:

Additional Layer

Death masks have been a big deal at certain times in western history. Sometimes they were used to capture the likeness of a famous or important person for posterity. Sometimes they were used as an identification method of unidentified deceased people, before the advent of photography.

ANCIENT GREECE – WONDERS OF THE WORLD– SATELLITES – GREEK ART

Fabulous Fact

The Greeks used herbs, nutrition, and surgery to treat disease, but they also used magic like this talisman which reads “begone bile the god chases you away.”



Photo by Marie-Lan Nguyen

Famous Folks



Athena, goddess and patron of Athens.

Additional Layer

The city of Athens had a constitution. Read it and compare it to the constitution of the United States, upon which all modern constitutions are based.

Hummus

In a blender, combine:

- 1 can chick peas (also called garbanzo beans)
- 1 clove of minced garlic
- 2 Tbsp. olive oil
- 1 tsp. lemon juice
- salt to taste

Serve the hummus as a dip for pita bread, crackers, or fresh vegetables.

EXPLANATION: Feast Fundamentals

A feast is the perfect culmination at the end of a unit if you make it more than just a party. The kids can bring all the projects they've worked on throughout the unit and use them as the table centerpieces. Each person should be given a few minutes during the feast to share what they learned and show off their work. If they've written a report or story, they could read it aloud. If they created a puppet show, they can perform it. They could recite a poem they memorized. Having an audience will give them great motivation to do quality work, allow them a forum to practice articulately speaking to a group of people, and will be a terrific review of the concepts covered within the unit.

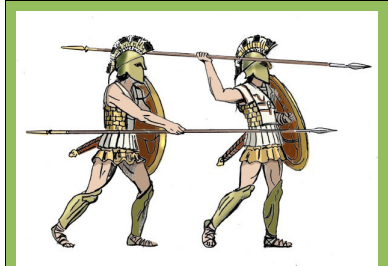
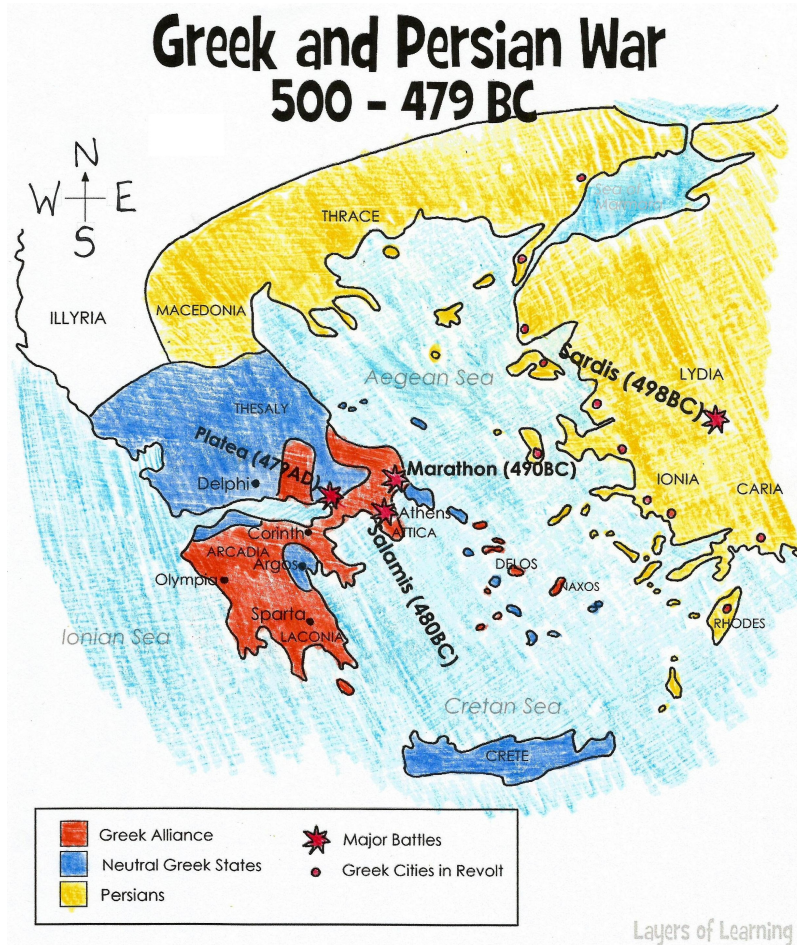
🌱🌿 EXPLORATION: Greek-Persian War

The Persians had expanded their empire in a whirlwind of battle, swallowing all before them. Many cities which had been groaning under the rule of the Assyrians and others welcomed the kinder Persians in with open arms. But the Greek colonies had always been free, small city-states. When the Ionian Greeks were overcome and made part of the Persian Empire they did not appreciate this at all. Many of the Greek cities rose up in rebellion. The Greeks in the Aegean and on the Greek Peninsula could see the Persians preparing to conquer more of the Mediterranean, and so many of the Greek city-states decided to support and help their Greek brothers in Ionia. This was the beginning of the Greek and Persian War.



ANCIENT GREECE – WONDERS OF THE WORLD– SATELLITES – GREEK ART

Color a map of the Greek and Persian War. A printable map can be found at the end of this unit. Reference the map below for help.



Greek hoplite soldiers wore armor. Their main weapon was the spear, which could be thrust or thrown. The hoplites were citizen-soldiers, not full time professionals. All free citizens (only males were citizens) had to serve in the army for a portion of their time. In Athens it was until age 60, in Sparta for life.

As soon as the Athenians became aware of the Persian invasion they sent a runner, Phiddipedes, to go ask the Spartans (who had the biggest army around) to come to their aid. The Spartans were right in the middle of a sacred peace festival and couldn't possibly come before the next full moon, ten days away. Phiddippedes ran back to Athens shouting his news to the city. He died in the town square, having run some 80 miles almost non stop. The modern marathon is run to commemorate Phidippedes' feat, though the distance was reduced to the 26 miles between Athens and Marathon.

🌟 🌟 EXPLORATION: Battle of Marathon Reenactment

Book VI of Herodotus' History of the Persian Wars, gives the account of the battle of Marathon, one of the decisive battles of the Greek and Persian War. The Persians had brought in an armada of 600 ships, landing 20,000 (or more) infantry and cavalry just north of Athens. They were angry because Athens had supported the successful Ionian Greek revolt. Athens responded with a force of 10,000 hoplites. The two armies met 26 miles northeast of Athens on the plain of Marathon, a flat level plain surrounded by hills and the sea.

The Greeks were outnumbered 2 to 1 and the terrain was perfectly suited for their enemies who had a large cavalry. The Greek generals hesitated, sitting there for five days, staring at the Persians. Miltiades, one of the generals, singing the everlasting Greek song of glory and honor on the battlefield, finally convinced the others, and they lined their soldiers up in one long line facing the Persians.

ANCIENT GREECE – WONDERS OF THE WORLD– SATELLITES – GREEK ART

Additional Layer

Athens invented a new form of government called democracy. Many people mistakenly believe that democracy is the form of government made so popular by America in the modern day. Actually America has a republic, very different from a democracy. Learn more about the important difference between a republic and a democracy. Find out what happened to the Athenian democracy.



The Pnyx, where the Athenian Assembly met.

Writer's Workshop

The Delian League is a fascinating topic for a research paper by a high schooler.

Answer these questions:

What was the Delian League?

How did it start?

What were its goals?

What were the results of the Delian League to the Greek world?

How can you relate the Delian League to today?



Greeks in phalanx formation

With a mile separating the two forces the Greeks yelled “charge” and ran pell-mell at the Persians. Though somewhat surprised and confused by this foolish behavior, the Persians were not worried. The center of the Greek line gave out. But the long line of the Greek forces wrapped around the Persian army and outflanked and surrounded them. 6,400 Persians were slaughtered with only 192 Greeks making their way to Hades. The Persians ran back to their ships in the hopes of falling upon the now undefended city of Athens. But the Athenians were on to them and rushed back to the city to defend it. The Persians slunk off in defeat. The Athenians were now poised to take a leading role in Greek affairs as we will see.

Re-enact the battle of Marathon. If you don't have enough people, add stuffed animals to fill out the ranks.

If conditions were so in favor of the Persians, why did the Greeks win?

1. The Greeks wore much better armor; Persian soldiers were mostly naked and carried only bows and slings.
2. The Greeks used phalanx formations, which have been proved to be more than a match for mounted men when utilized by a disciplined force.
3. The Persians relied on their archers, but the Greek armor defeated the arrows.
4. Cavalry is effective because the combined weight of the horse and rider as it charges in battle is very overwhelming, but the Greek charge precluded the Persian charge.
5. The Greeks were defending their homes; the Persians were conquering new territory.

ANCIENT GREECE – WONDERS OF THE WORLD– SATELLITES – GREEK ART

🌍 🗺️ EXPLORATION: Delian League

The Delian League was a loose confederation of city states. They united in order to have more power jointly than they could separately. They had common military goals and agreed to support one another militarily in case of conflict, including a common military police force. They also had a common treasury. The whole organization was based on the little island of Delos. From the beginning Athens was the strongest and most powerful of the Delian city-states. Over time Athens solidified this position, until they were able to move the treasury to Athens in 454 BC. With the treasury at their disposal and the other city states under their control, Athens entered upon their greatest period ever. At this point Athens was resented and hated by the other Delian cities. In spite of protests and revolts Athens held on to power, dragging the other Delian cities into the Peloponnesian Wars against their will and ultimately resulting in the downfall of Athens as well as the others.



Here is how Athens behaved toward the subservient city-states of the Delian League and how Athens maintained its control according to Thucydides, a Greek historian from Alimos, who wrote *The History of the Peloponnesian War*:

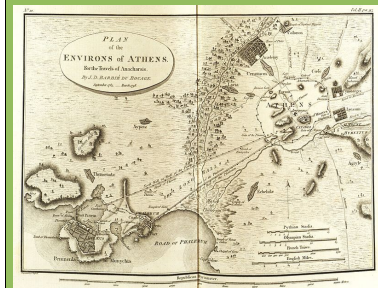
Of all the causes of defection, that connected with arrears of tribute and vessels, and with failure of service, was the chief; for the Athenians were very severe and exacting, and made themselves offensive by applying the screw of necessity to men

Additional Layer

Compare the Delian League to the United Nations today. How is it different and how is it the same?



Athens



The city of Athens included a market place known as the agora. There was also a meeting place, called the pynx, where the citizens all met to vote together in a noisy meeting of democracy. Nearby, on top of a rocky hill called the Acropolis, was the temple of Athena, known as the Parthenon. And finally, there was a theater, dedicated to Dionysius, where the annual contest of plays was held. You'll find a coloring sheet of the Parthenon in the printables section at the end of the unit.

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Fabulous Fact

Just in case you thought revisionist history is a new thing . . . The Greek historian Herodotus apologized when he wrote that the Athenians had once defeated the Persians. By the late 400's BC everyone was talking about how the Spartans had single-handedly defeated the Persians and saved the whole Greek world, because by then Athens' imperialism had disgusted everyone.

who were not used to and in fact not disposed for any continuous labor. In some other respects the Athenians were not the old popular rulers they had been at first; and if they had more than their fair share of service, it was correspondingly easy for them to reduce any that tried to leave the confederacy. The Athenians also arranged for the other members of the league to pay its share of the expense in money instead of in ships and men, and for this the subject city-states had themselves to blame, their wish to get out of giving service making most leave their homes. Thus while Athens was increasing her navy with the funds they contributed, a revolt always found itself without enough resources or experienced leaders for war.

Athens weakened its sister cities by allowing them to pay with money instead of sending soldiers to the army. This meant that the sister cities had no military of their own, no experienced fighting men, and no weaponry at the same time they were supplying Athens with the funds to build its own military. We call this shortsightedness.

Make a chart showing the pros and cons of being a member of the Delian League, first if you are not Athens and then if you are Athens. Compare the two charts. Now discuss the problem of the Delian League. Why didn't it work? How could it have been made to work better?

Famous Folks

Artemis was the goddess of the hunt, wild animals, childbirth, and young women.



This is a bronze statue of Artemis with her sheath of arrows, the bow missing from her hands.

Photo by Giovanni Dall'Orto

😊 😊 😊 EXPLORATION: Athens vs. Sparta

Many years later, around 500, a Roman historian named Plutarch would write about some of the most famous Greeks and Romans in parallel “lives” biographies. His purpose was to compare and contrast. He paired Solon, the lawgiver of Athens with Lycurgus, the father of Sparta.

Read these two lives and do your own comparison. Have two groups, each one taking the position of either Solon or Lycurgus. Have a debate about the best way to run a city.

You can find Plutarch's *Lives* online for free.

😊 😊 😊 EXPLORATION: Greek Golden Age

The golden age of Greece is the period between the Greek-Persian War and the Peloponnesian War. This is when the greatest art, music, poetry, plays, and sculpture were produced.

Write a biography about one of the great figures from this time:

- Pericles (Politician)

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- Sophocles (Playwright)
- Euripedes (Playwright)
- Aristophanes (Playwright)
- Aeschelus (Playwright)
- Menendes (Playwright)
- Praxiteles (Sculptor)
- Demosthenes (Politician/public speaker)
- Herodotus (Historian)
- Socrates (Philosopher)
- Plato (Philosopher)
- Aristotle (Philosopher)
- Thucydides (Historian)
- Gorgo of Sparta (Politician/philosopher)
- Cynisca of Sparta (Olympic Athlete)
- Olympias (Mother of Alexander the Great)
- Korrina (Poet)
- Sappho (Poet)

Make your biography inventive. If you are telling about a playwright, make your biography into a short play. If you are telling about a statesman, write your biography as an inspiring political speech. You get the idea.

🌞 🌱 🌿 **EXPLORATION: Peloponnesian War Spear**

This war was primarily between Athens and Sparta, but they managed to drag nearly everyone else in as well. The Spartans won, but the conflict cost the Greek world everything. They became so weakened that young Alexander of Macedonia took the Greeks by storm and then proceeded on to the rest of the known world.

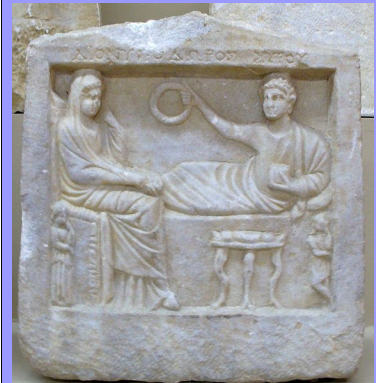
“Peloponnesian” refers to the Peloponnesian League, formed by Sparta and named after the odd looking peninsula at the southern end of the Greek mainland, which went up against the Athenian Delian League.

Make a war spear. Use a long dowel or broom handle. Pad



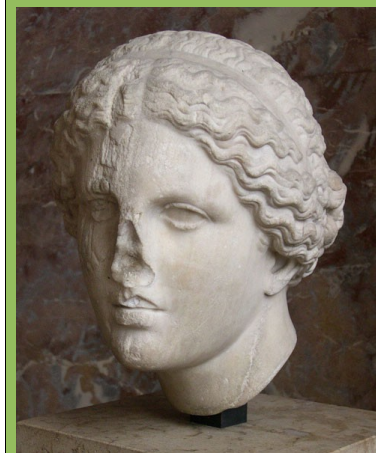
Fabulous Fact

The Greeks had parties called Symposia. Men got together and reclined on couches, talked and laughed, ate and drank, and had slaves come and entertain them, no women allowed.



This is a scene of a symposium carved into a Thracian (northern Greece) grave stone.

Additional Layer



This is the head of Aphrodite, a Roman copy of a Greek Statue by Praxiteles.

The Greeks were the first to use realistic forms for people.

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Fabulous Fact

The Greeks believed that everything in the universe was made up of a few simple basic ingredients: fire, earth, water, and air. These four ingredients combined in different ways to make up all matter. That belief held sway until only a few hundred years ago.

Greek Medicine

The Greeks believed that the body contained four humors: blood, black bile, yellow bile, and phlegm. If these four were out of balance then the body experienced disease.

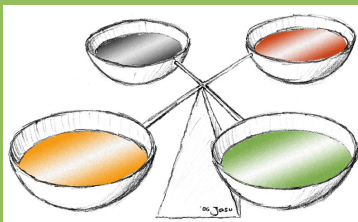
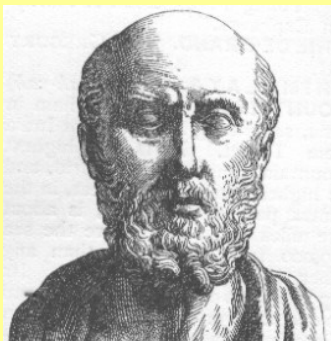


Image created by Jakob Suckale

Famous Folks



Hippocrates is the Father of Modern Medicine. Learn more about him.

the end with foam and duct tape if you are concerned about it actually being used as a weapon. On the handle write this information using a fine tipped permanent marker. Or type it up, print it out, and tape it on. If you'd like you can pretend to be there at the war and writing down what is happening in the form of a journal.

Phase One 431-421 BC Archidamian War

- Spartans surround Athens, pushing people inside the city walls.
- Athenians maintain access to the sea and bring supplies into the city, suffering no real harm.
- Plague breaks out in Athens, killing 1/3 to 1/2 of the people.
- Athens takes the war to Sparta and raids Spartan land, inviting helots, Spartan slaves, to revolt or flee. Without the helots to farm the Spartans will starve.
- A couple of pitched battles are fought in which Athens comes out on top. A truce is signed.



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Phase Two 421-413 Interlude

- Officially at peace, the allies of Athens and Sparta engage in continual spats during this time.
- Sparta and Athens and many of their allies join in the largest land battle of the war. Sparta wins.
- Sicily, Greek cousins of Athens, called for military help and Athens answers, hoping to take over all of Italy.
- Sparta sails to the aid of Syracuse. Sparta and Syracuse win important battles.

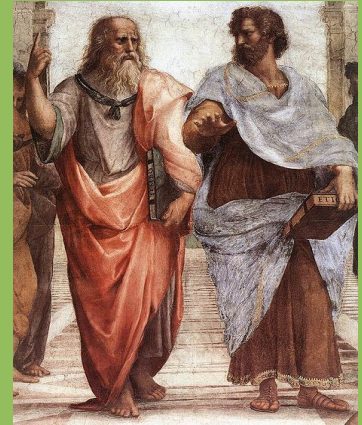
Phase Three 413-404

- Sparta strengthens its hold on the Athenian countryside, forcing Athens to get all its goods from overseas and cutting off all legitimate money making. Athens has to demand more tribute from its subject states.
- The Athenians were defeated on land and at sea by the Syracusan league with Corinth and Sparta. Athens' army is killed or sold as slaves.
- Sparta blundered and was slow to take advantage of the new situation.
- Athens released the hundred ships it had kept in reserve.
- Athens goes on a winning spree at sea, regains some of their wealth and holds their empire together . . . barely.
- Athens has internal squabbles and executes some of its most experienced commanders.
- Sparta attacks Athens' grain supply in the Hellespont, luring Athens into battle, where Athens is trounced at sea.
- Back at home Athens is starved into submission and the war ends.

Conclusion:

- Sparta grants clemency to Athens, forbearing to destroy the city and enslave the inhabitants.
- Athens is given a Spartan ruler.
- After thirty years Athens is granted democracy again and regains influence in the Greek world.
- The Greek world is impoverished by the wars and in a few decades a Macedonian named Phillip will conquer them all.

Famous Folks



Plato and Aristotle shown in a fresco painting by Raphael. Most of western thought is based on the writings of these two Greeks.

Fabulous Fact

Funeral stele, monuments carved in stone, were very common in ancient Greece. There are many examples surviving to today. Here is one of a Greek couple, Thrasea and Euandria, clasping hands.



Photograph by Marcus Cyron

GEOGRAPHY: WONDERS OF THE WORLD

On the Web

Go visit

<http://www.dynamic2moms.com/ancientgreece.htm> for some printables to go with this unit, both about ancient Greece and the wonders of the ancient world.

Fabulous Facts

This is an imaginary version of the Temple of Artemis by a medieval artist who never saw the site or probably any Greek architecture at all.



Here are the Hanging Gardens of Babylon:



An artist's imagination of the Colossus of Rhodes:



In this unit we'll explore some wonders of the world, both ancient and modern. The ancient wonders of the world were defined by the Greeks thousands of years ago and we always speak of the same seven wonders: The Hanging Gardens of Babylon, Statue of Zeus at Olympia, Great Pyramid at Giza, Temple of Artemis at Ephesus, Mausoleum of Mausolus at Halicarnassus, Colossus of Rhodes, and Lighthouse of Alexandria.



On some of the older Greek lists the Lighthouse is replaced by the Ishtar Gate of Babylon. The Greeks made these lists mostly as tourist guides, the must-sees of the ancient world. All the ancient wonders are in the lands directly around the eastern Mediterranean, the world of the Greeks. There were seven because the Greeks believed the number seven to represent perfection.

Modern wonders are trickier to define. We'll discuss some in several different categories that we feel count as wonders, but we'll leave some pretty amazing stuff off our lists too, because we can't fit absolutely everything in. It's fine if you explore some wonders we don't cover or even if you aren't particularly impressed by some of the ones we do name.

Besides simply learning about wonders of the world, we'll use this interesting stuff to teach more about maps and how to find places on a globe and map, and we'll practice coloring maps, making keys, and drawing the compass rose.

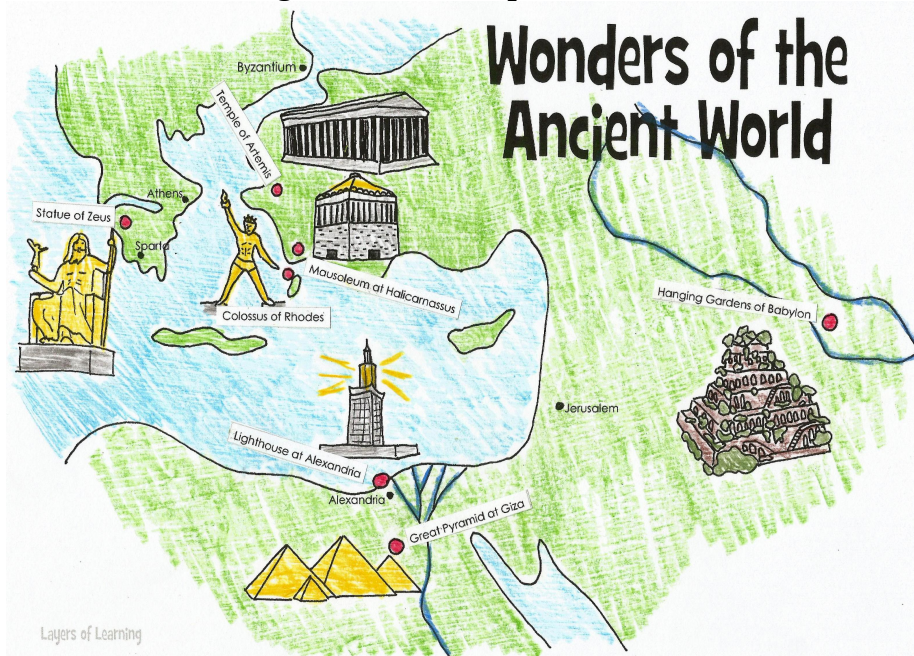
🌞 🌱 🌍 EXPLORATION: Map of Ancient Wonders

To introduce the idea of wonders ask the kids what they've seen in their town that is really, really cool. Brainstorm as many local neat things as the group can come up with. A wonder is something that is so amazing and awe inspiring that we can hardly believe it is real. In the ancient world there were several man-made wonders that amazed and awed the ancients; they still

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awe and amaze today, though only one of them is still standing. As we find these places on a map, see if you can guess which one is still standing.

Use the "Wonders of the Ancient World Map" from the end of this unit. The small open circles mark the location of the wonders. Color the circles red. Color the water blue. Color the land green. Color the wonders any way you like. Next cut the word tags off the bottom of the map and glue them on the map next to the correct wonder. As you label each location tell a few facts about the wonder. Or hopefully you've got a book on hand from your library and you can show the kids pictures of each wonder as you discuss it. Don't forget to add a compass rose.

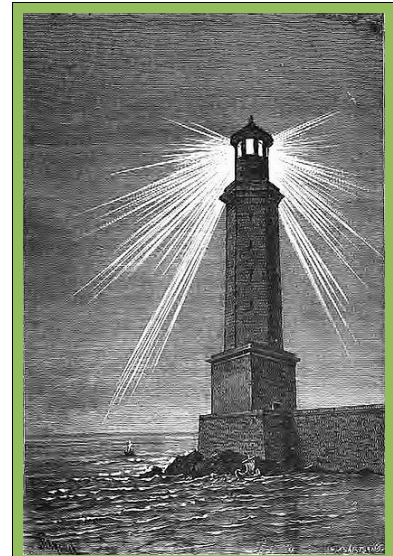


🌞 🌿 EXPLORATION: Map Keys

Maps use a key, sometimes called a legend, to help people understand the symbols on a map. Look at a few maps in atlases, a map of your town, or a road map of your state. Look for the key and identify some of the symbols. Why do you think map makers use symbols instead of just writing everything out on the map? Make a map of your neighborhood and add symbols and a key.

🌞 🌿 🌍 EXPLORATION: Wonders of the World Key

In this map activity, a world map will be used (see the end of the unit). Kids will have to choose a color for each type of wonder: ancient, modern, and natural. Then they will mark the locations of the wonders on their world map and make a key to show which kind of wonder they have marked. Choose (or have them choose) the greatest seven in each category (according to your opinion, of



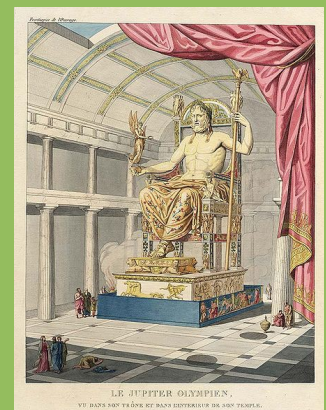
Lighthouse of Alexandria



The Great Pyramid at Giza, photo by Hedwig Storch



Site of the Mausoleum at Halicarnassus



Artist's rendering of the Statue of Zeus at Olympia

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Teaching Tip

On every map you have your kids do from here on out make them put on a compass rose, title, and key if necessary. Little bits of consistent practice will go a long way.

course.) They will have to use an atlas to find the locations and then transfer them to their world map. Each of the wonders should be labeled on the map. In the lists below we give some choices of wonders to use along with the city and country they are located in. For the ancient wonders we put in the modern city nearest the ancient location so kids would be able to find the place in a modern atlas. Remember to label the compass rose.

ANCIENT WORLD	MODERN WORLD	NATURAL WORLD
Lighthouse, Alexandria, Egypt	Channel Tunnel, Straight of Dover	Victoria Falls, Zambezi River, Zambia
Hanging Gardens, Al Hillah, Iraq	CN Tower, Toronto, Canada	Great Barrier Reef, East Coast, Australia
Pyramid, El Giza, Egypt	Panama Canal, Panama	Mount Everest, Nepal
Temple of Artemis, Izmir, Turkey	Itapu Dam, Parana River, Brazil	Grand Canyon, Arizona, USA
Statue of Zeus, Pyrgos, Greece	Great Wall of China, Zhangjiakou, China	Lake Baikal, Russia
Mausoleum of Mausolus, Bodrum, Turkey	Pearl Bridge, Kobe, Japan	Aurora, Arctic Circles
Colossus of Rhodes, Rhodes Island, Greece	Space Shuttle, Cape Canaveral, USA	Harbor of Rio de Janeiro, Brazil
	Maya Ruins, Yucatan Peninsula, Mexico	Angel Falls, Venezuela
	Zuiderzee Works, Netherlands	Gunung Cave, Borneo
	Christ the Redeemer Statue, Rio de Janeiro, Brazil	Paracutin Volcano, Mexico

Additional Layer

What about other types of wonders like greatest wonders of technology or science or art?

Can you come up with a list of wonders in various categories?

What are your criteria for picking a wonder?

🌞 🌿 EXPLORATION: Postcards

Choose a wonder of the world and create a postcard from you sent to someone back home. On the front of the card draw a picture of the wonder. On the back write a note home telling what you see and your favorite part. Address it like a real postcard.

🌿 🌍 EXPLORATION: Why A Wonder?

Why did the Greeks pick the wonders they picked? Today we usually pick the highest, the biggest, the most massive – you get the idea – modern people are impressed with size. For the Greeks, size may have been part of it, but it certainly wasn't the whole picture. Make a table of the seven ancient wonders and list their important features. After you've analyzed them, what do

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you see in common between them? Why do you think they were picked? Now compare the ancient wonders to modern wonders. How do the criteria stack up?

😊 😊 😊 **EXPLORATION: Vote!**

There is a group called New 7 Wonders (New7wonders.com) who decide what makes for a wonder today (of course, their opinion isn't really more important than yours anyway). You can visit their website, see what wonders people are talking about now and vote for the next seven wonders you think should be included on a list. Learn about each wonder and where it is before you vote.



Pearl Bridge, Kobe, Japan. Photograph by Kim Rötzel.

😊 😊 😊 **EXPLORATION: Model**

Make a model of one of the wonders of the world. Research it first and find out everything you can. Then explain your model in front of a group. Be ready to take questions at the end of your oral report.

😊 😊 😊 **EXPLORATION: World of Wonders**

Make your own book called *World of Wonders*. On each page, draw the wonder and then write a description of it – how it was built, what it's used for, and why it was made. If you don't want to draw you can print off coloring pages – just do an image search for wonders of the world coloring pages.

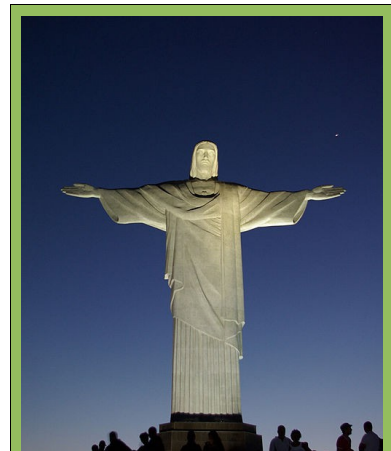
😊 😊 **EXPLORATION: Matching Game**

Print out two copies of the Wonderful Things in the World Matching Game on cardstock. Play a memory match game. There's a colorful version and one for you to color.



Alhambra Palace, Spain is considered a wonder by many people.

Photograph by Jan Zeshky



Christ the Redeemer Statue, Brazil is the second largest art deco statue in the world. It overlooks the city of Rio de Janeiro.

Photograph by Cyro A. Silva

Writer's Workshop

Make a brochure about wonders of the world from this unit.



SCIENCE: SATELLITES

Additional Layer

Some of the coolest discoveries and inventions of the modern day were first dreamed up by science fiction writers. Jules Verne imagined nuclear submarines and trips to the moon long before they happened. The writers of the TV series *Star Trek* imagined cell phones, black holes, storms in space, and much more before we discovered these things. Check out some science fiction literature or movies and see what you think. Do you think warp drive, worm holes, and extra terrestrial life are still waiting to be discovered? Read *Physics of the Impossible* by Michio Kaku or *The Physics of Star Trek* by Lawrence Krauss for scientific analysis of fictional ideas.

Fabulous Facts

A comet that hits the sun or comes so close that it burns up is called a sungrazer.

A comet's orbit is much more elongated than a planet's.

When comets near the sun they speed up a lot.

A satellite is a body that orbits another body in space. For example, the moon is a satellite and so is the Hubble Space telescope. Satellites can be either natural or man-made. Asteroids, rocky chunks, comets, made of ice and rock, and meteors, chunks of rock that hit the earth, are all natural satellites. There are thousands of them orbiting the Earth and Sun, most in the asteroid belt between Mars and Jupiter.



A comet is a natural satellite.



Milstar is an artificial communications satellite.

What's the difference between a comet and an asteroid or a meteorite? A comet is a big frozen chunk of ice and rock that orbits the sun or another star or zooms madly around space until pulled into the orbit of a star. As they near a star they get heated, and bits of them fall off, leaving a trail of debris. As the earth and other planets orbit through the path of a comet, they are rained down on by this debris, called meteoroids, and other rocks and stuff floating in space. The rocks that rain down on us are called meteors. If those chunks are large enough to survive passing through the atmosphere and make landfall we call them meteorites.

Asteroids are hunks of rock ranging from pebbles to bodies as large as several hundred miles across that orbit the earth. Most asteroids are in the asteroid belt between Mars and Jupiter. Scientists think that they are debris that couldn't form into a planet because of the amount of gravity exerted by nearby Jupiter, but we can't be sure, especially as we're not really sure about how planets form in the first place.



A meteorite is a rock from space that hits the Earth.

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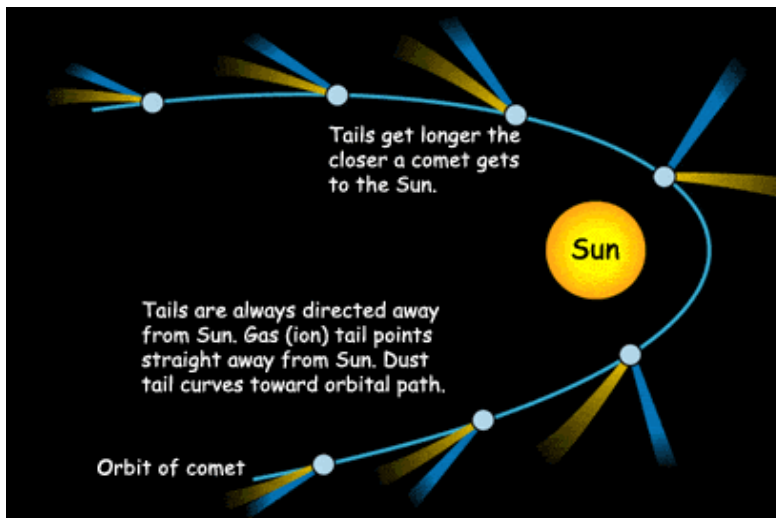
😊 😊 **EXPLORATION: Anatomy of a Comet**

On a sheet of paper, color a comet with a white crayon. Make a circular head and a very long tapering tail. Use lots of wax and make it very heavy. Now mix a tablespoon of dark blue, dark purple, or black tempera paints with 1 teaspoon of water. (It's not really important to measure exactly. The idea is to have a thin watery paint.) Paint over the whole paper with quick strokes. Where the wax was, the paint will not stick, so your comet should stand out.



Hint: use watercolor or art paper. If you use regular printer paper, the water will make it wrinkle all up and the picture will turn out wrecked.

Let it dry and then write, cut out, and paste labels to your comet picture. The labels should identify the parts of the comet: nucleus (center of the head), coma (gasses that surround the nucleus), tail. Talk about how a comet orbits as well.



Harbingers of Doom

Comets are thought to have accompanied the deaths of the Roman General Agrippa (12 BC), Attila the Hun (453 AD) and Emperor Valentinian (455 AD).

And just after the death of Julius Caesar a comet was sighted, causing admirers to say it was his soul rising to heaven.

Shakespeare wrote these lines in his play *Julius Caesar*:

*When beggars die, there
are no comets seen; The
heavens themselves
blaze forth the death of
princes.*



Great fires, Black Death, certain invasions, the destruction of Jerusalem and the birth of Jesus Christ have all been associated with comets.

On the Web

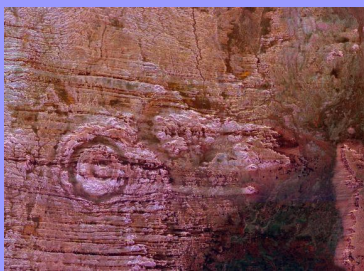
NASA has a balloon powered nanorover project online for kids to make. It's modeled after the real nanorovers that NASA designed to study asteroids in space.

Search for "balloon powered nanorover."

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Additional Layer

Because our Earth is so alive with plate movement and volcanic activity (and also because the atmosphere prevents a lot of entry), we don't see as many asteroid impact craters as some of the other planets. There are some however. Barringer Crater in Arizona is pretty impressive. Aorounga Crater in the Sahara Desert is 10 miles wide. Astronauts in space have seen and taken pictures of these large craters.



Aorounga Crater, Chad

Writer's Workshop

Research the NASA stardust mission. What was the goal of the mission and what did they find? Write a report.



This is a picture of a comet photographed by NASA for Stardust.

EXPLORATION: Build-a-Comet

You need:

- dry ice, crushed
- rocks
- dirt
- water

You need to wear heavy gloves when handling the dry ice so you do not burn your hands. This is an adult demonstration, not a hands-on activity for kids.

Double or triple the dry ice and crush it up using a rolling pin or mallet. Add a couple of large handfuls of crushed dry ice to a large bowl. Pour in a handful of small rocks and toss in a handful of dirt. Now add a 1/2 cup of water at a time until you can squeeze your "comet" into a ball.

Comets are thought to be made of ice, rock, and dirt (including a bit of organic material). Um, where does the organic material come from, if indeed it is in a comet?



EXPLORATION: Natural Satellite Acrostic

Find out some interesting facts about comets, meteors, or asteroids. Armed with your information, write an acrostic poem about one of them. Start by writing the word down the side of your page.

C
O
M
E
T

Now write things you know about the satellite you chose using each of the letters in the word.

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Considered a bad omen by many

Orbits

Miniature compared to a planet

Etymologically speaking, “hair of the head”

Tail trailing behind them

Curious about the “hair of the head” part? Aristotle used a form of the word to describe what looked a lot to him like stars with hair. What a terrific description.

😊 😊 **EXPLORATION: Asteroid Fact Book**

Make a fact book on asteroids. Have these sentences written one on each page, and make illustrations to go with them. You can also find images online to paste into your book. Feel free to add or subtract facts.

1. Asteroids are made of rock.
2. Asteroids orbit the sun.
3. The main asteroid belt is between Mars and Jupiter. An asteroid belt is a path in space where many asteroids are in orbit.
4. Most asteroids are just given a number, but some are named after famous Greeks from mythology.
5. Some asteroids, like Ida, have small moons orbiting them.
6. Asteroids can be as small as a speck of dust or as large as several miles across.



Hi, meet Gaspra, just a friendly neighborhood asteroid.

😊 😊 😊 **EXPLORATION: Asteroid Belt**

Draw a diagram of the solar system, putting the asteroid belt in its place. Younger kids can just add the main asteroid belt. Older kids can get more detailed and add in the Hildas groups and the Jovian asteroids (in the orbit of Jupiter), the Trojans, and the

Additional Layer

The Little Prince by Antoine de Saint-Exupéry is a children's classic about a little boy who lives all alone on a tiny world (asteroid) of his own. He travels from little world to little world looking for a friend. Finally he makes his way to Earth.

Famous Folks

Jean Muller is an American astronomer who has discovered fifteen comets and several asteroids, plus made many other astronomical discoveries.

Explanation

I love throwing random trivia questions at my kids. We pull out *Trivial Pursuit* or *Are You Smarter Than A 5th Grader* and quiz each other as kind of a warm up for school. We earn house points (like in *Harry Potter*), so of course, correct trivia answers earn the kids points for their houses. It's always a hit, and it's a nice change from math drills and other "more important" information quizzing.

Karen

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Additional Layer

One of the most famous depictions of a comet in all of history is the Bayeux Tapestry. It was woven by a woman or women in the years immediately after William the Conqueror's conquest of England in 1066. A comet had been seen in the sky just before William sailed and he saw this as a good omen. The comet, which we now call Halley's Comet, is depicted in the tapestry.



Greeks. Notice that there are asteroids in orbit in many places other than the asteroid belt as well.

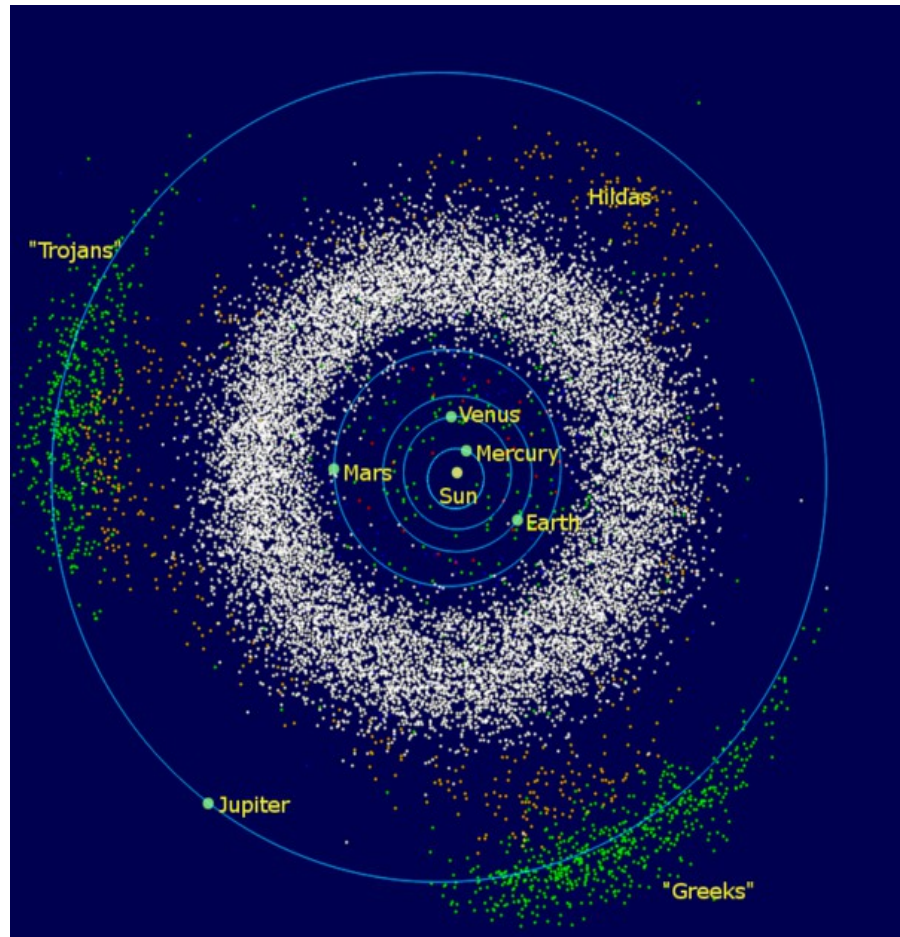


Image produced by NASA

🌱🌌 EXPLORATION: Centaurs

A centaur is a hybrid between an asteroid and a comet. All the centaurs discovered so far are big, minor planets, significantly larger than typical comets. They all orbit between Jupiter and Neptune and cross the orbital paths of these huge planets. They have elongated orbits like comets and a relatively short lifetime because of the gravitational pull of the big planets. They have comas like a comet, giving off a cloud of dust and gas as they sail through space.

Make a Venn diagram with comets on one side and asteroids on the other. Centaurs would go in the middle. Place these space objects in your Venn diagram in the correct spot. You'll have to do some research to find out what these objects are.

- Chariklo
- Hyakutake
- Gaspra

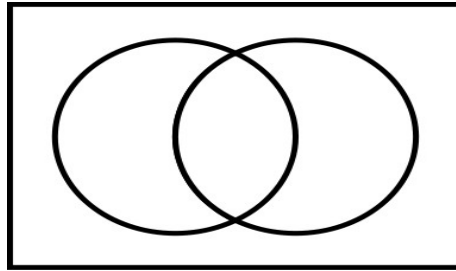
On The Web

You can find a really cool paper model of the GLAST satellite from NASA online. Just search for "GLAST satellite model."



ANCIENT GREECE – WONDERS OF THE WORLD– SATELLITES – GREEK ART

- Mathilde
- Hidalgo
- Ceres
- Swift-Tuttle
- Chiron
- Hale-Bopp



☺ ☺ **EXPERIMENT: Craters in the Kitchen**

Objects falling from space make a big hole called a crater when they hit the earth. Make your own craters and watch carefully how the meteors spread the “dirt.” Use a roundish object like a pebble, a marble, or a ball of clay as your meteor and a pan of powder, like flour or dry dirt as your landing zone. When the meteor hits, how deep does it go? How is the hole shaped? How does the “dirt” spread? Is there any difference if it's thrown instead of dropped? What if it hits at a low angle instead of straight on?

☺ ☹ **EXPERIMENT: Micrometeorite Collection**

1. Lay a plastic sheet outside on the ground on a sunny day. (You may also find good material in the debris that washes from your rain gutter.)
2. Shake the material collected to the center of the sheet.
3. Roll up the sheet and take it indoors.
4. Pass a magnet under the material collected. Shake everything not collected by the magnet off and discard.
5. Put the magnetic material under a microscope. Search for spherical, pitted objects. These are micrometeors from space.

Earth is constantly bombarded by stuff from space. Most of it is tiny like the micro meteors you find near your house.

☺ ☺ ☹ **EXPERIMENT: Shooting Stars**

Meteoroids, little bits of rock and metal floating in space, constantly hit Earth's atmosphere. Once they hit the atmosphere we call them meteorites. When they hit they get all hot from the friction. Rub your hands together really fast to see how friction can produce heat. The heat is so great that most of the meteoroids burn up or hit the ground as dust particles. When larger bits hit Earth we call them meteors.

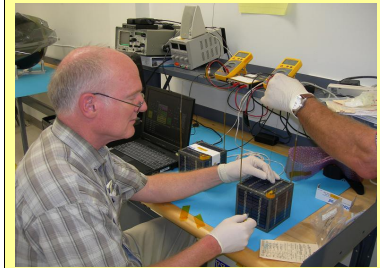
Go out on a dark, cloudless night and watch the sky for half an hour. On any night you will see at least a few meteorites. But if you go out during one of the meteor showers you'll get a spectacular show. Check online to see when meteor showers are expected.

Fabulous Fact

There are hundreds of amateur “OSCAR” satellites in space orbiting the earth and transmitting signals.

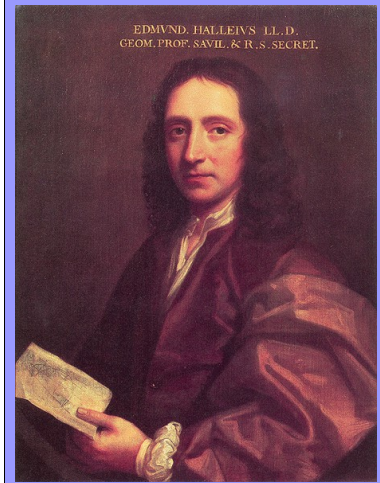
NASA allows them on their rocket launches as ballast for their missions.

You can learn how to build one of your own. Contact the Amateur Radio Satellite Corporation.



Famous Folks

Edmund Halley was the first person to realize that comets orbited. He calculated the path and orbit time of a comet which, when he was proved right, was named after him.



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Fabulous Fact



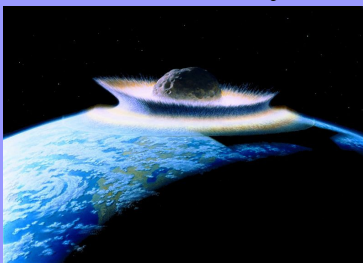
This is an especially bright meteor known as a fireball or a bolide, the terms are synonymous.

Fabulous Fact



The word “meteor” comes from the Greek word *meteōros*, which means “high in the air.”

Additional Layer



Many people believe that space rocks have crashed into Earth in the past and will in the future, causing great havoc, extinction of species, and in the case of future events, perhaps the destruction of human kind.

Artist Don Davis' conception of a cataclysmic impact event



Perseid meteor shower. Photograph by Mila Zincova.

🌞 🌱 🌌 EXPLORATION: Eyes in the Sky

Unlike natural satellites, manmade satellites were put into space by people. Brainstorm a list of the types of information we get from satellites today. Consider everything from the internet and cell phones to GPS and weather reports. Then write a paragraph expressing your opinion about whether or not nearly instant information has made the world a better place.

🌞 🌱 🌌 EXPLORATION: Man-Made Satellites

Learn the basic parts of a satellite and then build a model of one yourself out of stuff you've saved. You can use toilet paper roll tubes, foil, pipe cleaners, paint, egg cartons and stuff like that.

The amount of detail will depend on the age of the students. Basically you need to include at least the bus (body), solar arrays, antennae, and rockets.

🌞 🌱 🌌 EXPLORATION: Round and Round We Go

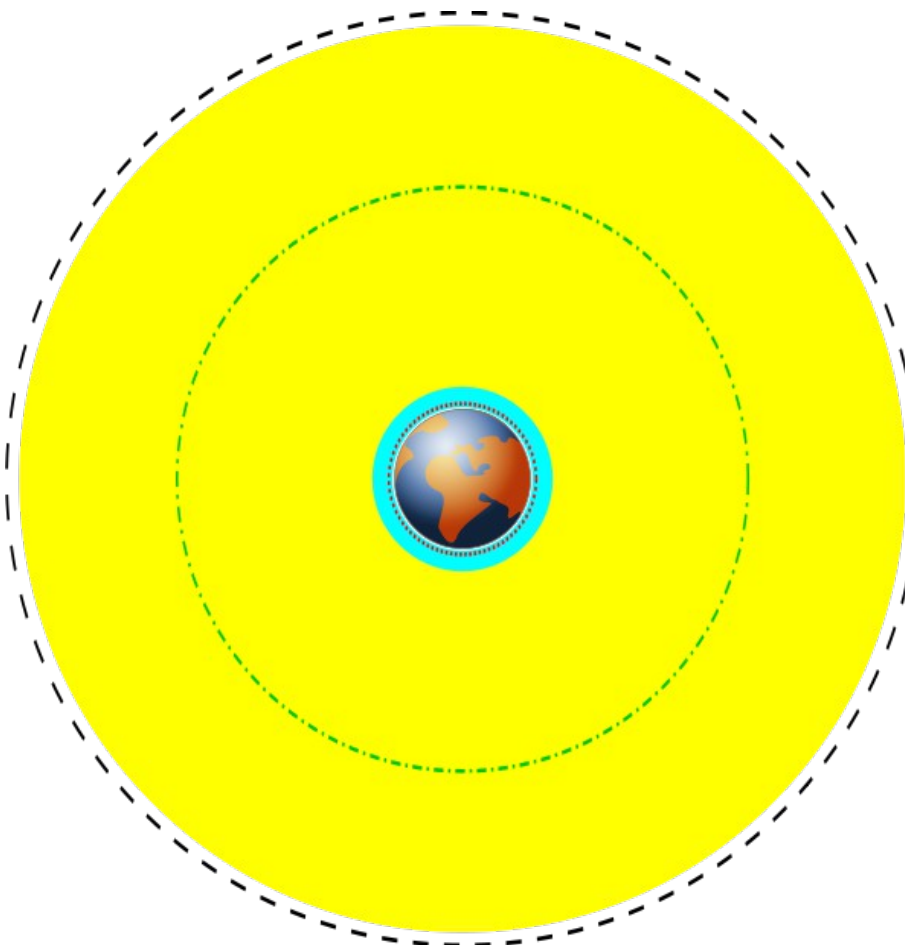
There are many different types of orbits that man-made satellites are put into around Earth depending on what people want the satellites to do.

There are communication satellites, weather satellites, GPS satellites, and research satellites. Space craft and space stations in orbit are considered satellites as well.

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The three main types of orbits are low-earth orbit, geostationary orbits, and polar orbits. Low-earth orbits are close to the earth, in the upper reaches of the highest atmosphere. Most satellites, including the space shuttle and the International Space Station, are in this orbit path. In the diagram below, the low-earth orbit is shown in light blue with the path of the International Space Station shown as a red dotted line, very close to the earth. Polar orbits are mainly used for weather satellites which orbit the earth from pole to pole in order to gain a good pictures of the whole surface of the earth. They are also low and close to the earth. The GPS satellites are in an orbital array in mid-range orbits, shown on the diagram below as a blue dotted line. The geocentric orbit is the highest, shown below as a black dotted line. The satellites at this height stay in a fixed position relative to the surface of the earth. Communications satellites like the ones for your cell phone, TV, and Internet usage are positioned here.

Draw your own diagram of the various orbits or demonstrate them with a globe and your paper model of a satellite.



Additional Layer

Many countries have portrayed satellites on their postage stamps.



Hungary



Germany



Soviet Union

Additional Layer

Militarily speaking the high ground is a position of strength and the highest ground possible is space. So far though no one has actually put weapons in space, though spy satellites and communications satellites used by governments have been in space for more than fifty years.

THE ARTS: CLASSICAL GREEK ART

Additional Layer

Read John Keats' *Ode on a Grecian Urn*. Here are a few things to consider as you read:

Is the overall tone of the poem joyful or sad?

The scenes depicted on the urn he describes are alluding to the story of the god Pan (god of fertility). Can you see a relationship between Pan and the scenes?

Have you ever been so happy you've wanted that moment to last forever?

Is Truth Beauty? Can you think of an example of an instance when Beauty and Truth are not the same?

Fabulous Fact



This is a figure from a Greek urn.

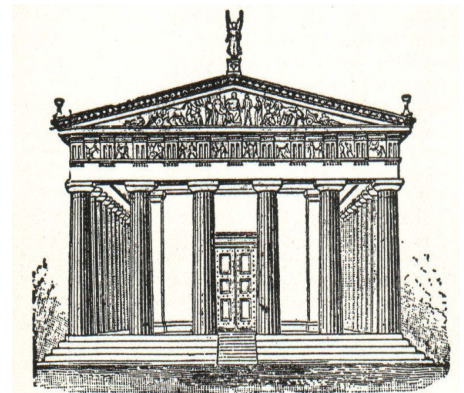
Art was incredibly important to the ancient Greeks. Painting, sculpting, drama, architecture, and writing were all vital parts of Greek culture. They decorated their homes, their palaces, and many of their everyday items. They even spread their love of art and their techniques with many of the countries and peoples around them, especially around the Mediterranean Sea. Their great sailing ability made this possible.



Parthenon, Athens

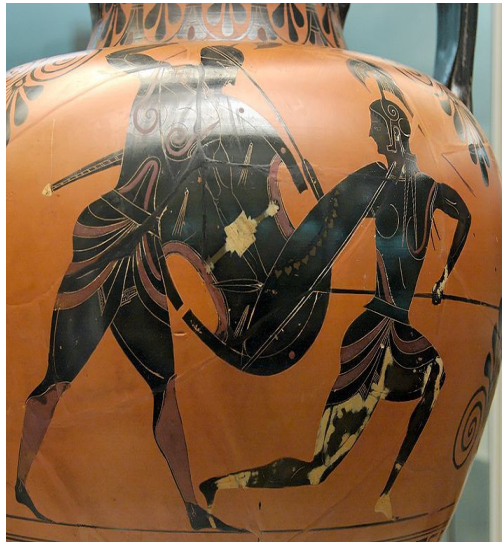
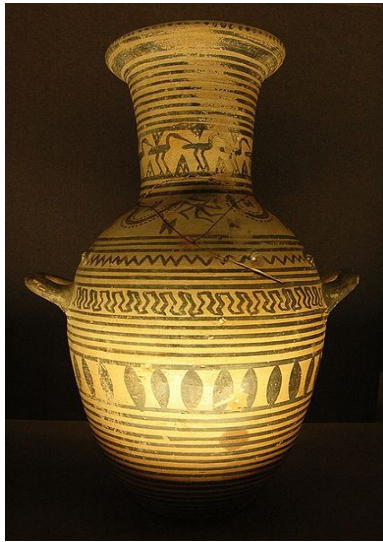
Greek architecture can usually be identified by its columns. The Parthenon, completely surrounded by columns, is the most famous structure from ancient Greece. It was built as a temple for the goddess Athena.

The paintings and drawings of the Greeks look much more natural than the ones the Egyptians made. They threw out a lot of those rules and showed people with a natural style, from many angles, unlike Egyptian frontalism.



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We still have many Greek vases and pots that embody art from that time. Originally they used geometric shapes to decorate their pottery, often in rows and patterns. Later they began including more organic designs on their pottery, even including images of people and gods. The pot on the left, below, shows a geometric pattern, and the pot on the right, created later, depicts Achilles battling Penthesileia. The Greeks particularly enjoyed using their art to tell stories of their heroes and gods.



This is a fragment of a piece of Greek glassware. The glass was shaped and then scenes were painted on the surface.

Fabulous Fact

The Greek plays that we have today survived because the Romans made a collection of a few of the Greek plays, bound them into a book, and taught them to their school children.

Hmm . . . and now you have to read them too.

Besides their physical arts, the Greeks invented the play. It began as a musical poetry reading. But the city of Athens decided to hold a yearly competition for their poets. Competition meant that every year the production had to be bigger and better and before you knew it there was a full blown play up on the stage. There never was scenery and the Greeks always kept the singing part with the chorus, but actors (all men) took various parts and wore costumes of sorts.

😊 🌱 EXPLORATION: Geometric Greek Pottery

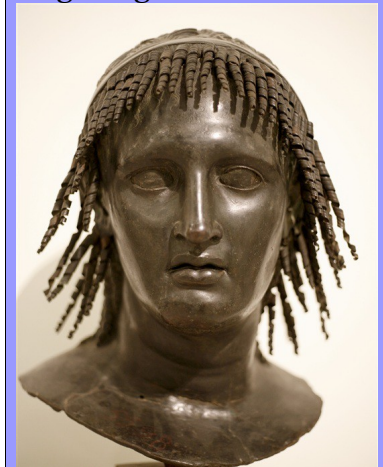
Gather your materials:

- red-orange construction paper (or another color)
- black construction paper
- black markers in various widths
- pencils
- scissors
- ruler

Draw a basic pot or vase on the red-orange paper and cut out the design. Use a ruler and a black marker to draw horizontal lines from the top of the pot all the way down to the bottom. Make some of the stripes wide and some more narrow. Next, choose a shape to repeat on each of the lines. For example, draw a row of

Famous Folks

The most famous Greek actor was Thespis. Today actors are called thespians after the original great actor.



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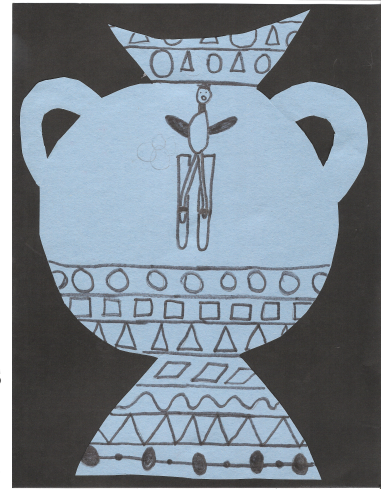
Fabulous Fact



This is a slender and elegant glass amphorae. The glass was colored while molten.

squares, then a row of circles, then a row of stars, and so on. Fill some of the rows of shapes in to make black shapes, and leave others as simple outlines. When all the rows are filled in, glue the pot or vase to the black paper.

If you'd like you can incorporate a picture scene of an important event into one of the rows. This vase depicts my son, Tyler, snow skiing in the mountains near our home. You can see a printable with many examples of shapes of pottery the Greeks used in the printables section at the end of this unit.



EXPLANATION: Straight and Ordered Lines

The basic element of line is easy to spot within Greek poetry. Look at several examples of Greek geometric pottery and trace your fingers along the lines. Greeks based their entire pieces on geometric lines and shapes. The straightness and continuity of the lines gives a feeling of order and familiarity.

Fabulous Fact

Greek theater was so important that they actually released prisoners from jail so they could attend the festivals.



A mosaic representing the god Dionysus. Mosaics are made of bits of colored tile, cemented into place to create a picture.



Photograph by Marie Lan-Nguyen

ANCIENT GREECE – WONDERS OF THE WORLD– SATELLITES – GREEK ART

☺ ☺ **EXPLORATION: Fresco Painting**

Fresco painting was a new style of painting that the Greeks developed. It was done by painting on to wet plaster. This allowed the painting to become part of the wall and the picture and colors stayed vivid instead of flaking off.

You can make your own fresco with a shoe box lid, some plaster of Paris, paints, and some brushes. Mix the plaster according to the directions on the package, then pour it into the lid of the shoe box and smooth it out. If you'll want to hang it later,

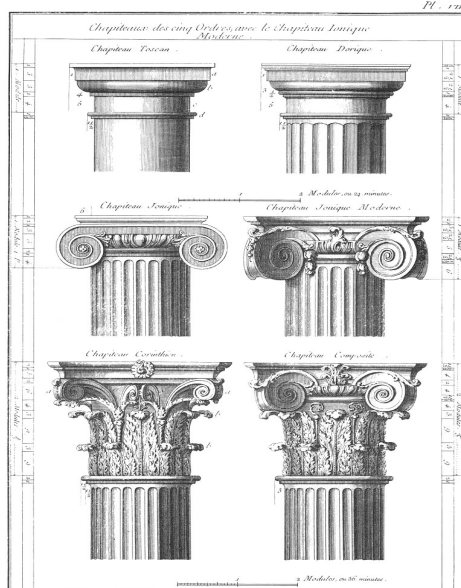


Dolphin fresco from the palace at Knossos, Crete.

insert a hook (a paper clip bent in a U shape works beautifully) at the top. Let the plaster set up just a bit. Before it's completely dry, remove it from the shoe box. Now use the flat, smooth side to paint a picture on. The paint will become partially absorbed, making your picture part of the plaster.

☺ ☺ ☺ **EXPLORATION: Three Orders**

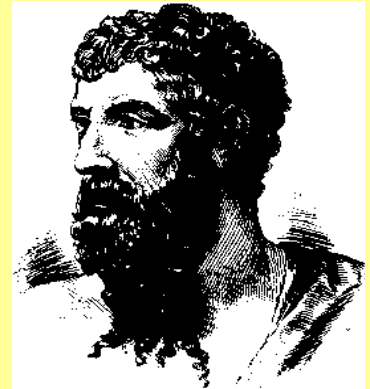
There were three orders of columns found within Greek architecture: the Doric, Ionic, and Corinthian. The most common was the Doric because it was the most simple. The top two columns you see in the picture are Doric. The Ionic was a bit more ornate. The middle columns are Ionic. They are fairly simple, but have much more ornate tops on them. The Corinthian was so ornate that they were incredibly rare. The more ornate, the more difficult it would have been for the artisan to craft it (and the more expensive to buy it). The columns at the bottom of the picture are



Architecture.

Famous Folks

Aristophanes wrote his first play, which won the 2nd prize at the Dinonyasian Festival, when he was still a teenager.



Fabulous Fact



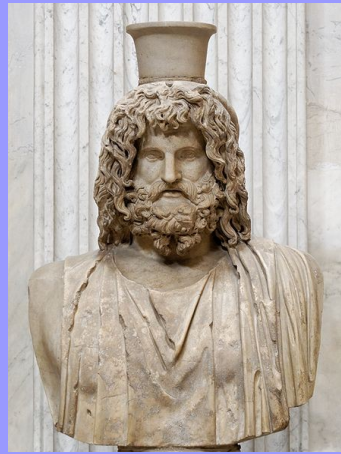
This wreath crown is made of finely wrought gold. Even the tiny veins in the leaves show up.

Expedition

Visit your state or province capitol building or a local courthouse to see modern copies of Greek architecture. Identify Greek influences. If you can't visit, search for pictures of the buildings online.

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Fabulous Fact



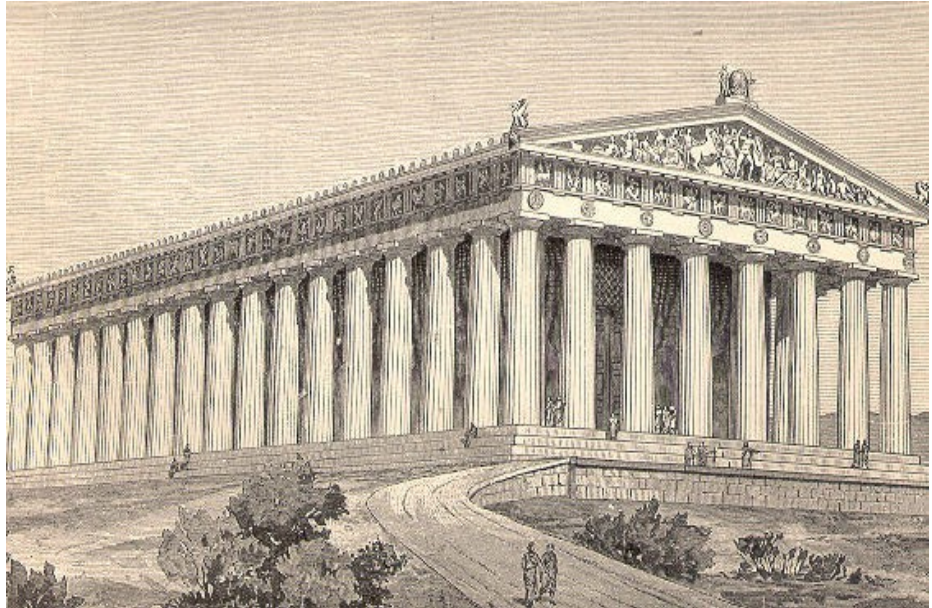
A Roman copy of a Greek sculpture of a bust by Bryaxis.

Photo by Marie Lan-Nguyen

Corinthian. Using the picture as a reference, do a pencil sketch in your sketchbook of at least one column style and label it as Doric, Ionic, or Corinthian. Using a ruler will be a vast help to you in your sketch. There is also a coloring sheet in the printables section for you. Identify each kind of column, draw a line to match them up, then color the columns.

😊 😊 😊 EXPLORATION: The Parthenon

The Parthenon is one of the first things to come to mind when we think about ancient Greece. It was built for the Greek Goddess Athena, who was a protector to the people. It stands at the acropolis in Athens, Greece. It was originally built to celebrate a military victory of Athens over Sparta during the Peloponnesian War. That original building was destroyed by the Persians, but was later rebuilt. It has been a treasury, a Christian church, a mosque, and the site of an ammunition dump which damaged it terribly when it was ignited. It is still thought of as a symbol of democracy and humanism.



Create a model of the Parthenon using cereal boxes as the foundation and ceiling, and toilet paper roll tubes as the columns. You may want to slope the ceiling by cutting away the long edges of the top cereal box.

😊 😊 😊 EXPLORATION: Greek Instruments

The Greeks didn't write down any of their music, so we don't know exactly what it was like, but we do know about some of the instruments they had. A lyre is like a small harp. It probably sounded much like our modern day acoustic guitars. Lyres were played very calmly and soothingly. According to Greek legend,

Fabulous Fact

Most Greek art is anonymous, at least now. But on some pots and sculptures we can see the signature of the artist.



This sculpture, known as the Belvedere Torso, was signed "Apollonios son of Nestor, the Athenian, made it"

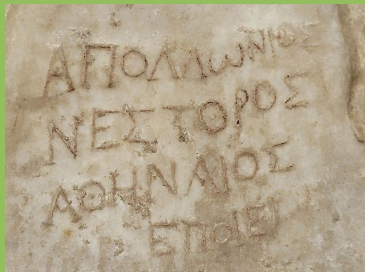


Photo by Marie Lan-Nguyen

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the very first lyre was made by Hermes, the messenger of the gods, and given to Apollo, the god of reason and logic (fitting because the Greeks considered music to be very methodical and full of order and patterns). The story goes that Hermes made the first lyre from a turtle shell. Greeks also had pipes (much like our recorders), drums, timpanons (like a tambourine), and finger cymbals.



This is a religious scene painted on wood. The people in the procession are going to an altar to perform an animal sacrifice. They have several instruments with them, including a flute and a lyre. This painting was found buried near Corinth and has letters from the Corinthian alphabet written near the top.

Make your own versions of some of the instruments:

Make a lyre using a shoe box. Cut a round hole in the top. Poke four brads on to each side of the hole, forming 4 straight lines, then wrap rubber bands around the brads for lyre strings. You can add a handle made from a paper towel holder if you'd like.

A pipe can easily be created from a piece of pvc pipe that has holes drilled into it in a straight row on one side. Cover some of the holes to create different pitches.

Drums are simple. A pot and a wooden spoon will do. Or you can get crafty and use a coffee can with waxed paper or leather from a fabric store stretched over the ends and held in place by a tight rubber band.

Put beans inside of two paper plates facing each other to make a tympanum. Punch holes around the outsides of the facing plates and thread yarn through them, tying them off at the end.

Finger cymbals can be made simply with 2 metal mason jar lids. Punch a hole into each one and attach a pipe cleaner loop into it

Fabulous Fact



This is a lekythos, a vessel used for storing olive oil. It has a carved family scene on it and is inscribed with the family names: Kallipe, her husband Mnesiptolemos, her mother Neoptoleme, and Apollodoros and Apolophanes, her children.

Photo by Giovanni Dall'Orto

Additional Layer

Greek music was used mostly to honor the gods and tell their stories. Do you listen to music for religious purposes? Why else do you listen to music? Why is music such a powerful tool?

Turn on a movie or TV show and then walk into the next room to listen. How much of the mood of the movie depends on music?

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Additional Layer



Most of the Greek Art we have today was preserved or copied by Romans. This sculpture of a child roughly handling his goose is a Roman copy of the sculpture by Boethos of Chalcedon.

Expedition

Go see a live play in person. Local colleges and high schools put on plays frequently at very low admissions.

Fabulous Fact



Tragedy and comedy masks are represented in this Roman mosaic.

for your finger. Attach one to your thumb and one to your pointer finger. To play them, just clang them together.

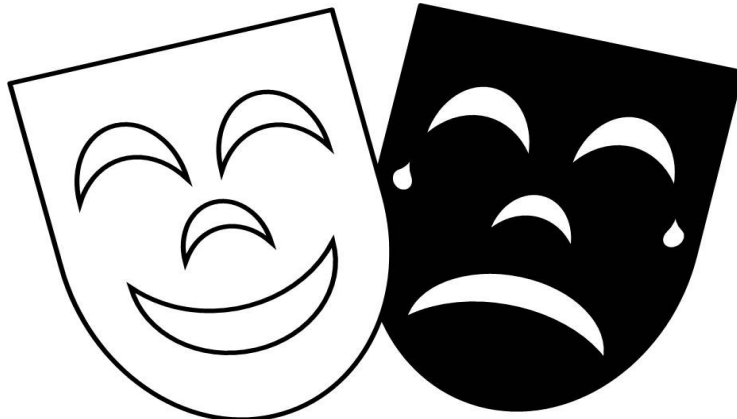


EXPLANATION: Greek Literature

As part of your combined art and history study of the Greeks, older students may want to delve into some classic Greek literature. Epic poems were a trademark of this time. Try reading *The Iliad* or *The Odyssey* by Homer. (There are also versions available for younger kids.) Sophocles' *Oedipus Rex*, Euripides' *Medea*, and Aristophanes' *The Frogs* are all Greek classics.

🌟🌟🌟 EXPLORATION: Make a Greek Play Mask

The main part of the “costume” for a Greek player was the mask which had either a happy face or a sad face. The happy face meant something good would happen to this character and the sad face meant that tragedy was about to strike. The Greeks always liked the tragic more than the happy ending. Large versions of these masks were fixed over the center of the stage and were known as comedy and tragedy.



Create an oversized version to place over your own stage while you do a play. Use two pieces of poster board. Make a simple

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happy face and a simple sad face to represent comedy and tragedy. Use a full sheet of poster board for each one, and cut out the outlines. Decorate your faces opposite from each other. For example, if one is gold with black features, the other will be black with gold features.

Hang them above your “stage” while you put on a play.

😊 😊 😞 **EXPLORATION: Put On A Play**

Act out one of the Greek myths in Greek style. Make masks for each of the characters and wear the mask of the character you are being. One person can play several different characters by changing the mask. Greek actors used their voices for great expression, but used their bodies for expression very little. They might use some hand gestures, but didn't prance around the stage like modern actors. There was also very little scenery. Before starting the play they would have made a burnt offering to their god, Dionysus, the patron saint of the theater.

<http://www.kidsinco.com/tag/greek-mythology/> has several Greek myths written into play form for elementary aged kids to perform. Older kids can try one scene from the original plays.



*Theater in Athens, Greece with the Agora in the background.
Photo by Herbert Ortner.*

😊 😞 **EXPLORATION: So Tragic!**

There were many Greek tragedians, but most of their names and their plays have been lost in the three thousand years since they

Explanation

I really believe we're cheating our kids if we don't at least touch on art appreciation, technical art skills, and freely playing with art. For our overall art curriculum at Layers of Learning, our focus is mainly on art appreciation and basic techniques and principles. We learn about the masters and their lives, their famous works, and the mediums they used to create with. We discuss the basic principles of art like line, shape, form, perspective, color, and more. We use this knowledge to create step-by-step projects in the styles of the masters so we can have a taste of what they created. These studies provide a working knowledge of the basics of what any educated person SHOULD know.

In addition to this curriculum you need to allow your kids to just play with art materials that you keep on hand around the house and give them instruction in art techniques beginning with drawing skills. How-to -draw books are the very beginning of this instruction.

Karen

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Additional Layer

The Greeks used theater as a forum to make political statements. Do people in the modern entertainment industry use their power to make political statements?

When you watch TV shows, plays, or movies pay attention to the underlying messages – there is nearly always a message.

wrote their plays. We do know of one of the greats though – Sophocles. He won the Dionysian Festival, a contest of plays held annually in Athens, twenty times and none of the plays he entered came in further behind than second place. Only seven of Sophocles' plays survive to today.

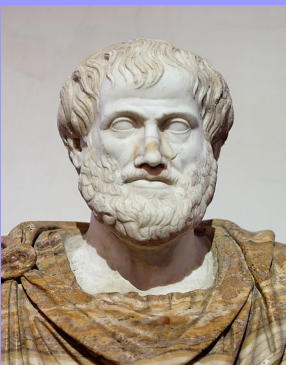
Read *Oedipus the King* (Oedipus Rex). The Greek plays were earthy in places, used dirty jokes, and foul language. Oedipus the King avoids some of these but the overall story is certainly not for the faint of heart. *Oedipus the King* from Trail Blazers is a good translation for teens. It is written in prose, rather than verse, updates the language for modern readers, and comes in either paperback or an audio version with a full cast of actors. But it still has a few places that border on bad language, though they stop short of the actual curse words. This version is also perfect for a class or group that wants to perform the play.

Get a guide book to help you in understanding and leading a discussion on the play.

Additional Layer

Aristotle, a Greek philosopher wrote a short treatise called “On Poetics.” He explains the purpose of poetry (including plays, which were always written in verse), and what makes a good poem versus a bad one. In reality, the ideas he talks of apply to all of art and are as relevant today as they were when he wrote it thousands of years ago.

Read what Aristotle had to say and discuss it. Do you agree with him or not?



🌱 🌱 EXPLORATION: That's Not Funny!

Greek comedies weren't always funny. They do have some slapstick humor and crude jokes sprinkled through them. They were called comedy though because they ended happily. Most Greek comedies were used to satirize and comment on current political events. The master of Greek comedy was Aristophanes. He wrote at least forty-four plays, eleven of which we have today.

Read *Acharnians*, which is considered by many to be one of his best plays. It is the story of one man who decides to end a war on his own, making a separate peace with Sparta. Through the course of the play the hero shows that the causes of the war were silly and not worthy of the lives of Athenians. Aristarchus wrote and showed the play while the city was actually at war with Sparta and the play was obviously a criticism of the war. Though Athens was a democracy, it didn't exactly embrace free speech, unless it was in a play. Though Aristophanes was sued several times for slander by his victims, the courts always dropped the charges. The great playwrights could get away with almost anything and Aristarchus won first place in the festival that year.

Use a guide book to help you with this one.

🌱 🌱 EXPLORATION: Politics As Usual

Another of Aristophanes' great plays was called *The Knights*. Using this play, Aristophanes directly criticizes and seriously attempts to bring down Creon, elected ruler of Athens with his

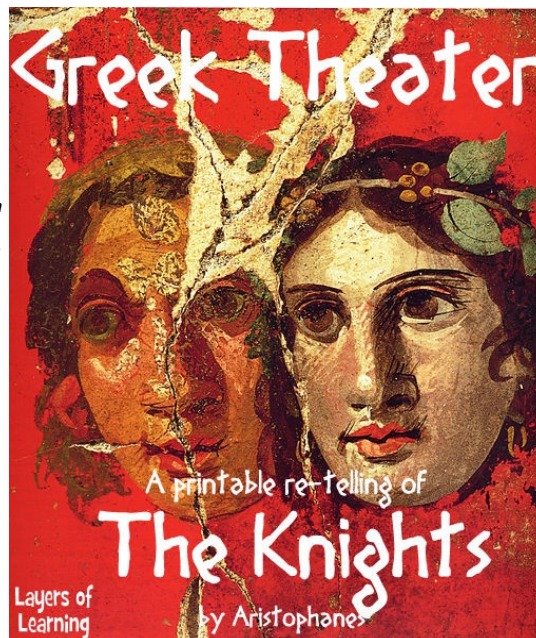
ANCIENT GREECE – WONDERS OF THE WORLD– SATELLITES – GREEK ART

witty satire. The whole play describes Creon's lying, weaselly character, his misuse of the funds and people of Athens, and his prolonging of the Peloponnesian War for his own gain. When you realize that Creon was actually sitting in the audience watching his name be drug through the dirt, you marvel at a society that had such a strong rule of law that Aristophanes was actually allowed to say this stuff.

On the Printables page of Layers-of Learning.com you will find a re-writing of this play for middle grade students under the heading "Art Printables." Students can illustrate the seven pages of the story as they read in abridged and modern language of the great contest between the elected leader and the everyman, named Sausageman.

The most intriguing thing about this story is how familiar it sounds. We can see and hear our own politicians in Aristophanes' story. In fact, in one of our versions we left blanks in place of the ancient names for you to fill in modern names to give you a feeling for how it would have felt to sit in the theater on the day Athens watched this play. We hope it will also help you to relate the play to our modern lives and government.

Older kids should read the original play.



Writer's Workshop

Write your own play. Begin by listing the cast of characters, then write it as you would a script, with dialogue, character, and stage directions –

Mom: Wake up! It's almost time for breakfast!

(Joy yawns and stretches)

Joy: How can it be morning already?

Additional Layer

John Adams, our second U.S. President, had this to say about art, politics, and learning:

"I must study politics and war that my sons may have liberty to study mathematics and philosophy, geography, natural history, naval architecture, navigation, commerce, and agriculture, in order to give their children a right to study painting, poetry, music, architecture, statuary, tapestry, and porcelain."

Coming up next . . .



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My Ideas For This Unit:

Title: _____ **Topic:** _____

Title: _____ **Topic:** _____

Title: _____ **Topic:** _____

ANCIENT GREECE – WONDERS OF THE WORLD– SATELLITES – GREEK ART

My Ideas For This Unit:

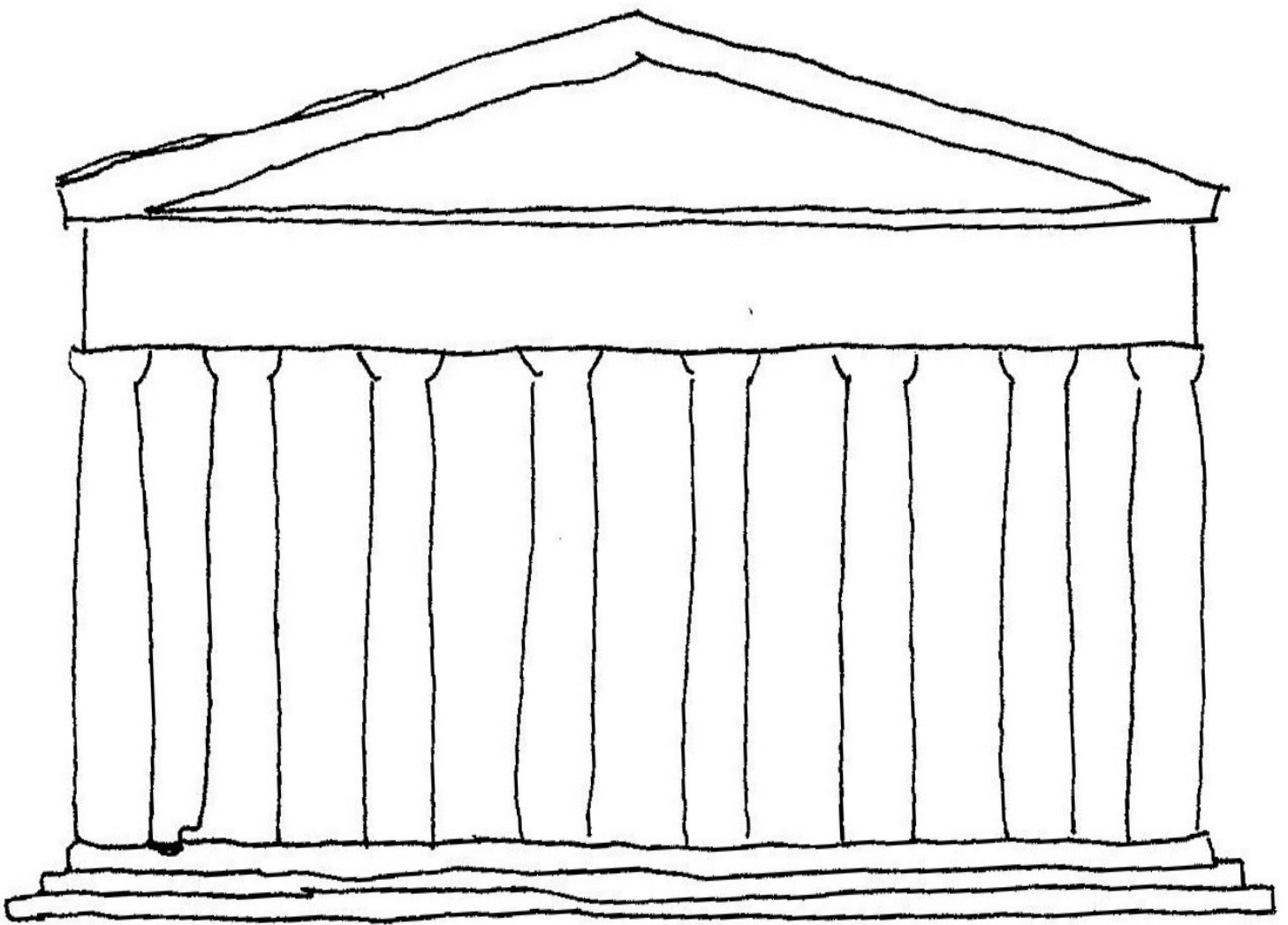
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The Parthenon

The Parthenon is a temple in Greece. It was built for Athena, who was honored as the patron deity in Athens. Its columns are trademarks of classic Greek architecture and it is seen as a symbol of classical times.

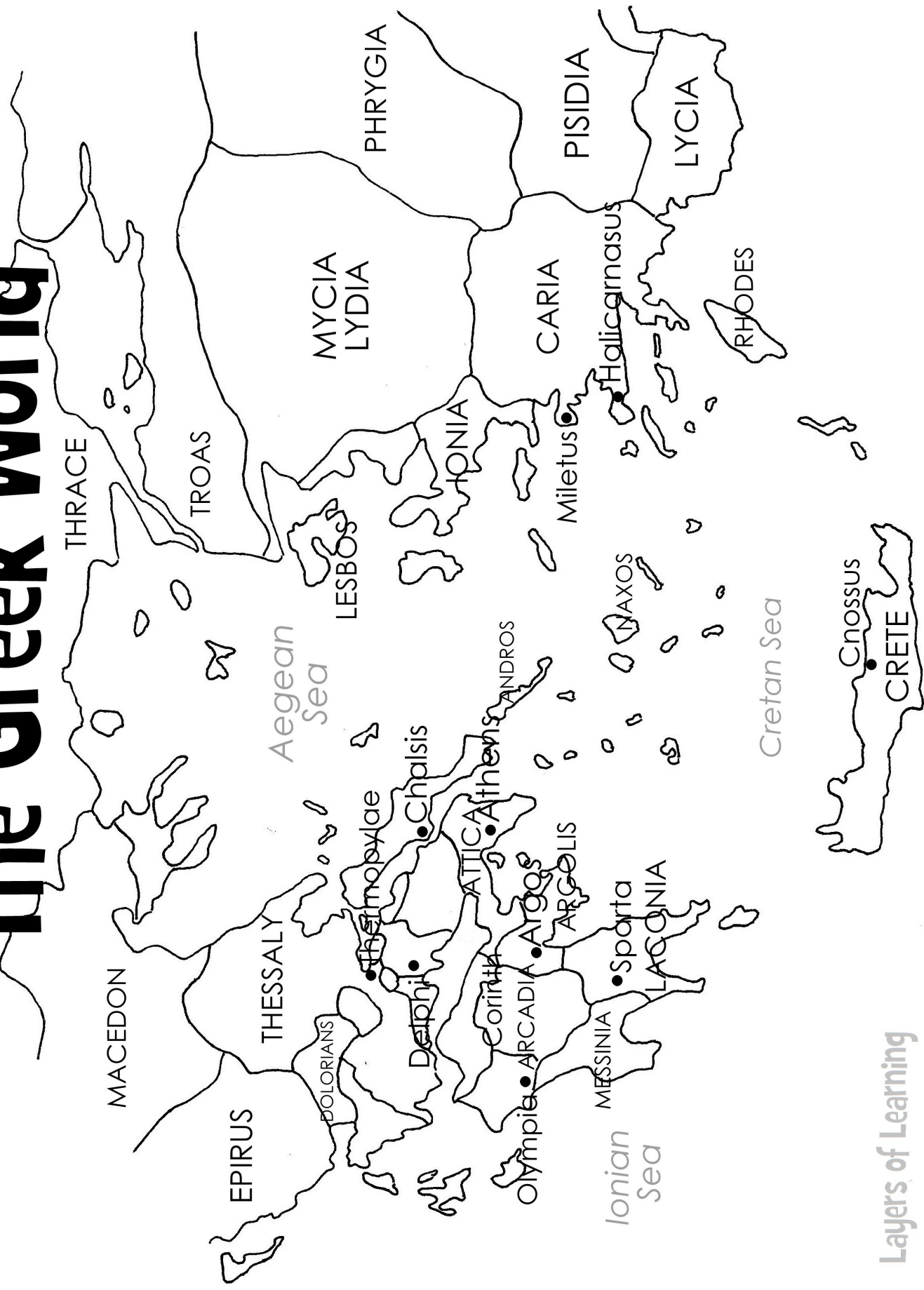


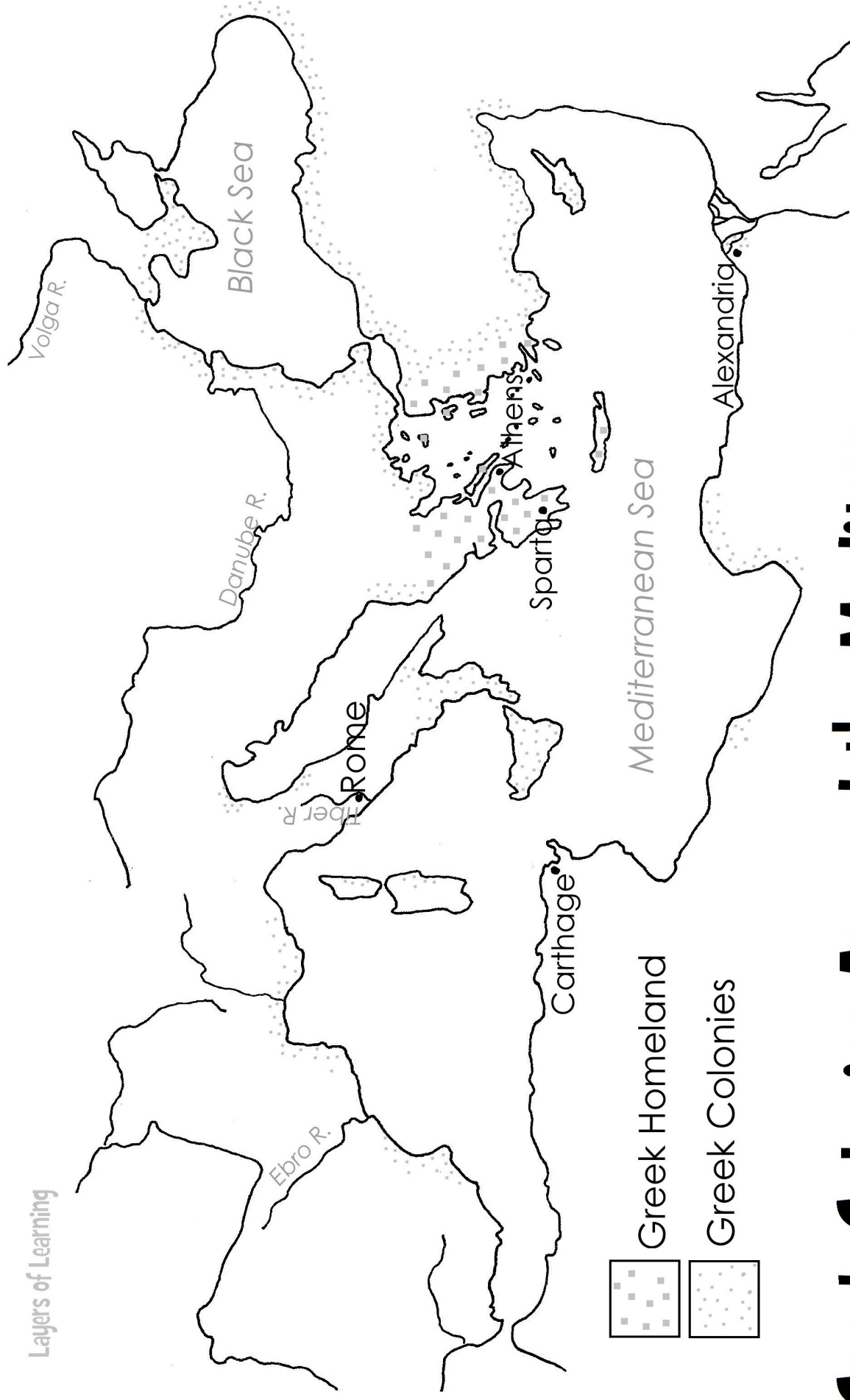
Layers of Learning

Ancient Greece: Unit 1-4

<p>1450 BC I-4</p>  <p>Myceneans conquer Crete and expand</p>	<p>800's BC I-4</p>  <p>First city state founded on Peloponnesian Peninsula</p>	<p>776 BC I-4</p>  <p>First pan-Hellenic Olympic festival</p>	<p>733 BC I-4</p>  <p>Beginning of Greek colonization of the Mediterranean</p>
<p>650's BC I-4</p>  <p>Rise of tyrants in many Greek city states</p>	<p>594 BC I-4</p>  <p>Athenian Constitution reformed</p>	<p>540's I-4</p>  <p>Persians conquer Ionia (eastern Greek islands)</p>	<p>490 BC I-4</p>  <p>Battle of Marathon, Greek victory</p>
<p>480 BC I-4</p>  <p>Battle of Salamis, Greeks beat Persians</p>	<p>478 BC I-4</p>  <p>Delian League begins, forming a military treaty between Greek city-states with Athens at the head.</p>	<p>448 BC I-4</p>  <p>Construction of the Parthenon begins</p>	<p>431-404 BC I-4</p>  <p>Peloponnesian Wars: Athens vs. Sparta; Athens loses</p>
<p>371 BC I-4</p>  <p>Sparta declines leaving Thebes the strongest of the Greek cities</p>	<p>337 BC I-4</p>  <p>Philip of Macedonia invades Greece</p>	<p>334 BC I-4</p>  <p>Alexander the Great begins his invasion of the Near East</p>	<p>323 BC I-4</p>  <p>Alexander dies of fever, leaving the empire to his three generals, who divide the empire into three parts. Ptolemy gets Egypt.</p>

The Greek World

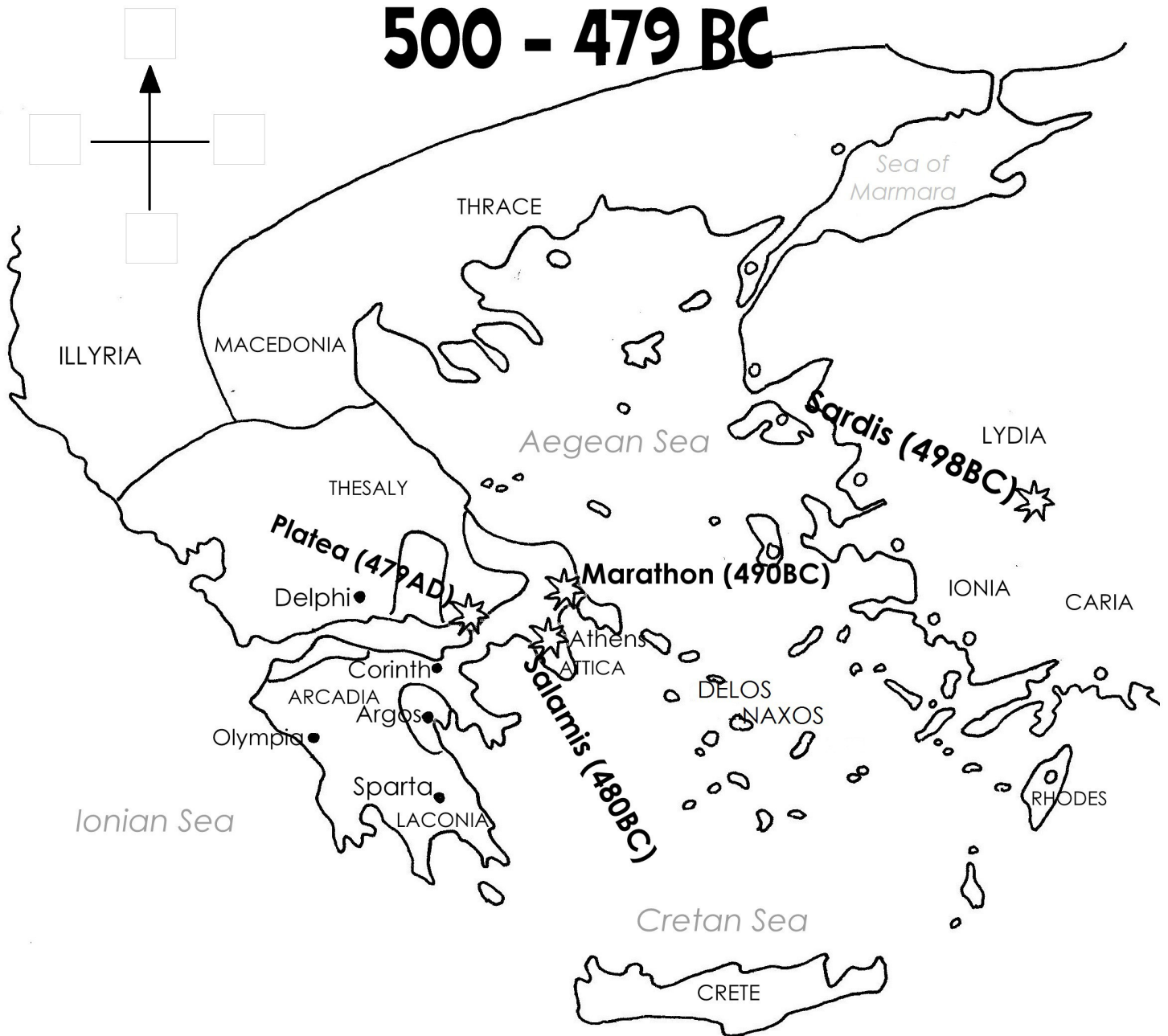









Greek Colonies Around the Mediterranean

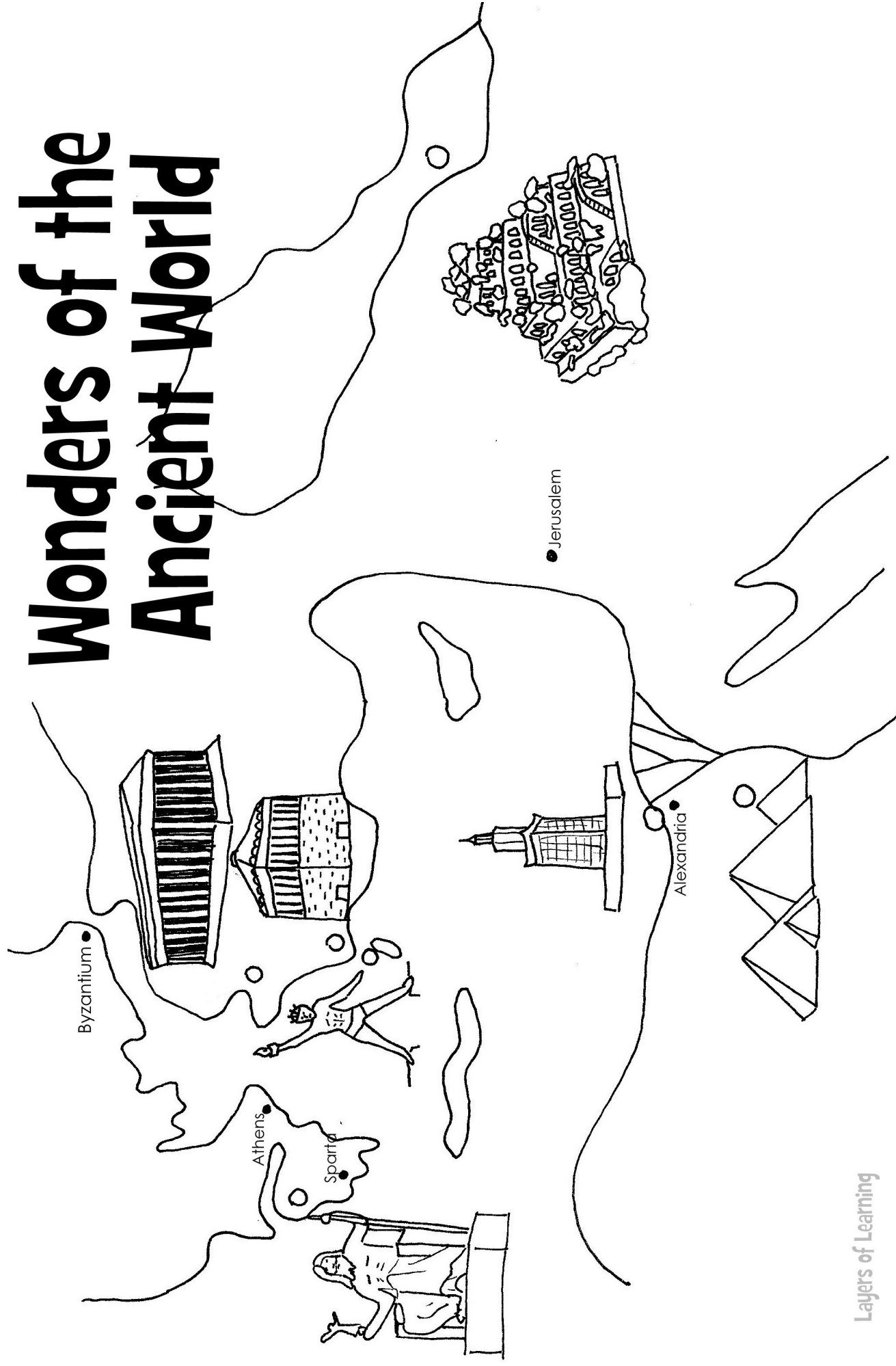
Greek and Persian War

500 - 479 BC



	Greek Alliance		Major Battles
	Neutral Greek States		Greek Cities in Revolt
	Persians		

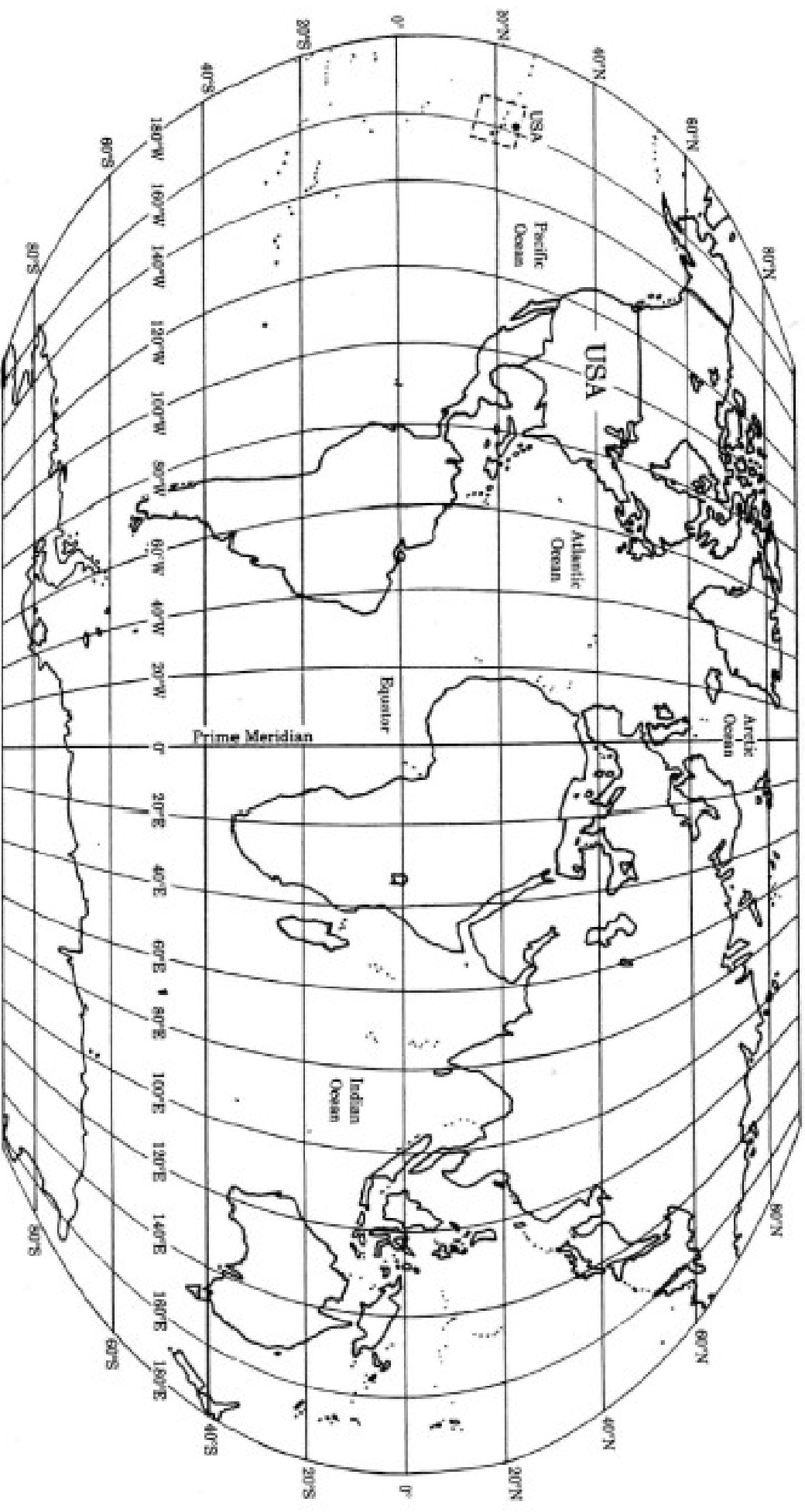
Wonders of the Ancient World



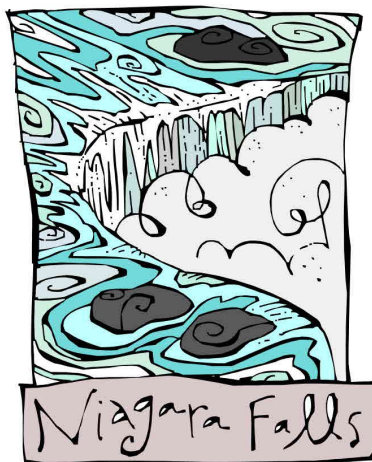
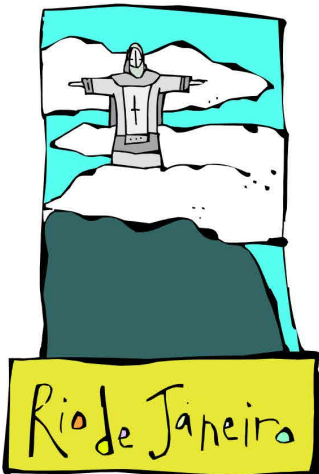
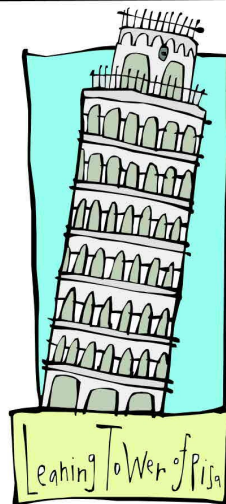
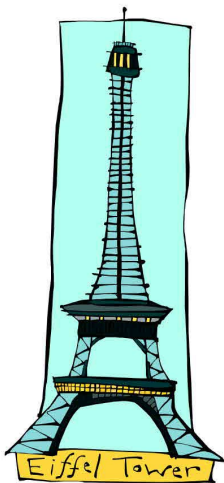
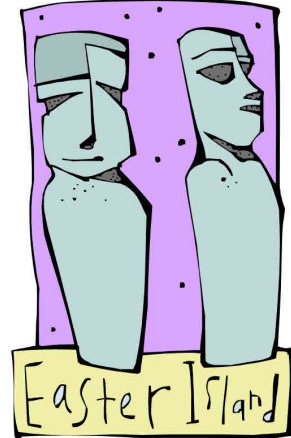
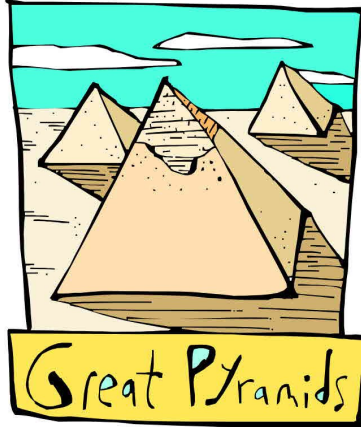
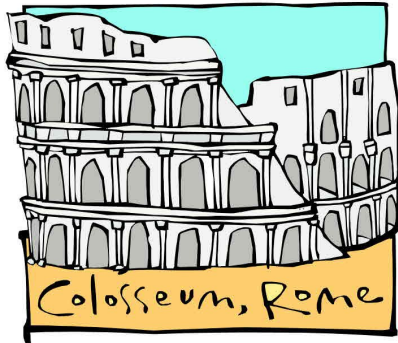
Layers of Learning

Colossus of Rhodes	Statue of Zeus	Lighthouse at Alexandria	Mausoleum at Halicarnassus	Temple of Artemis	Hanging Gardens of Babylon	Great Pyramid at Giza
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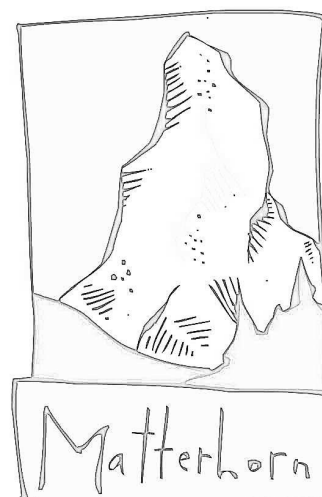
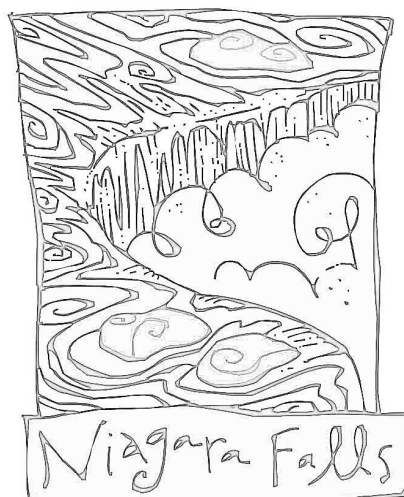
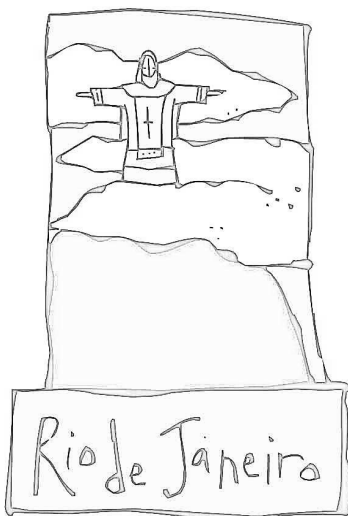
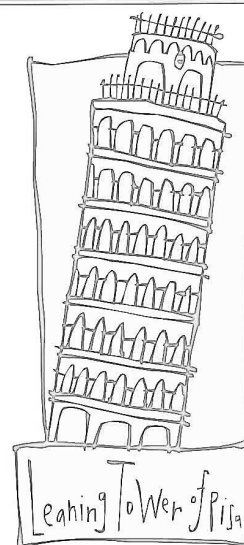
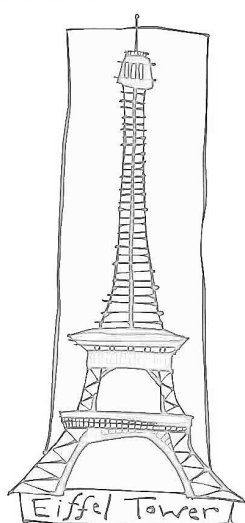
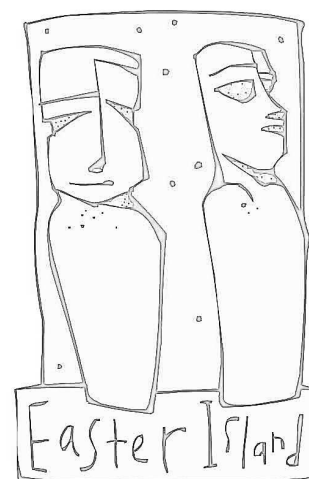
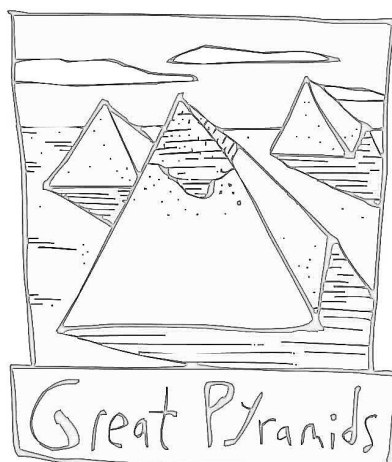
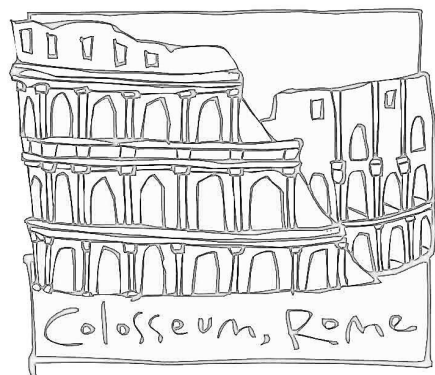
World Map



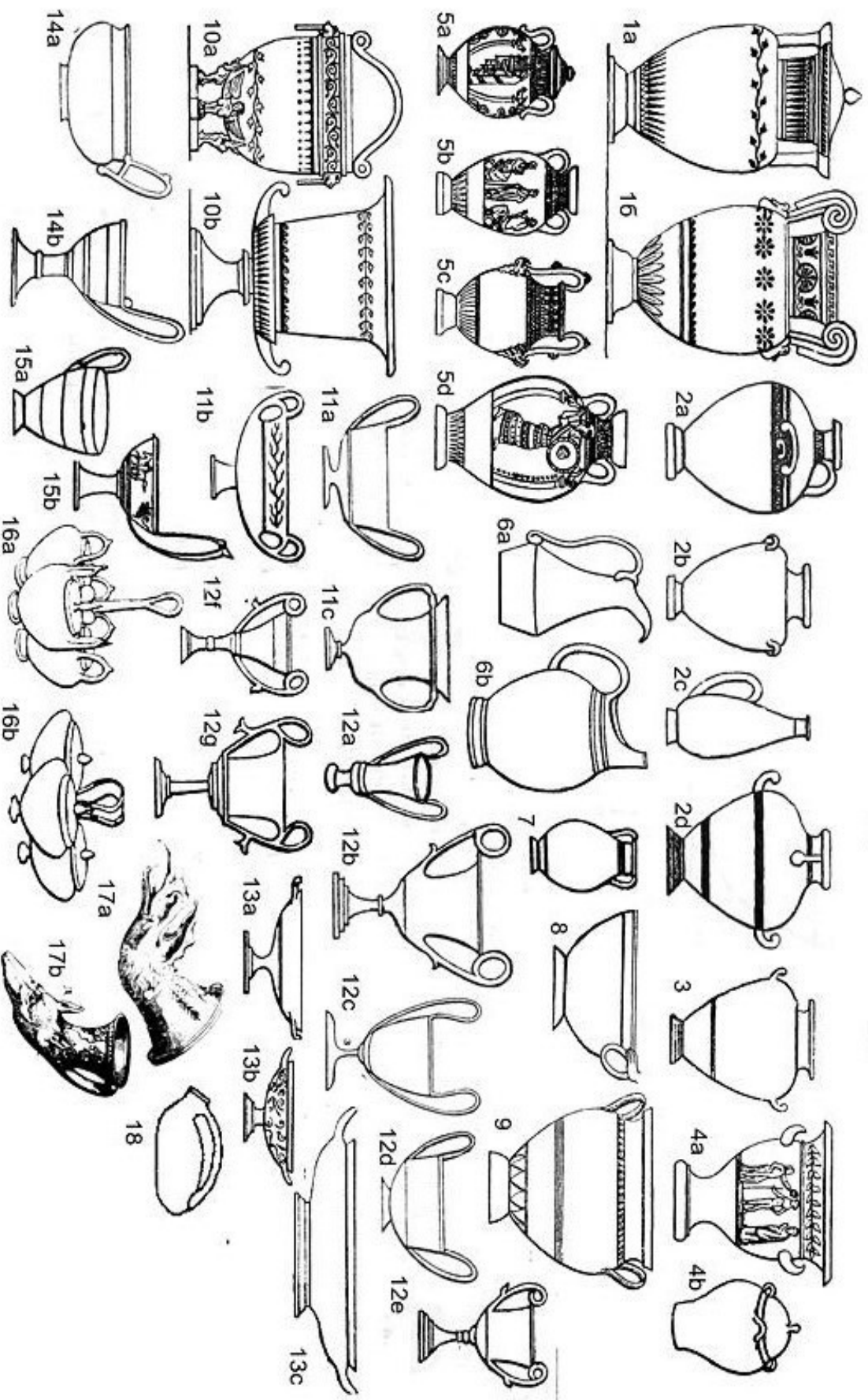
Wonderful Things in the World Matching Game



Wonderful Things in the World Matching Game



Greek Pottery Styles



The types of pottery are as follows: 1 - amphora; 2 - hydria; 3 - stamnos; 4a krossos; 5 - panathenaic amphorae; 6 - oenochoe; 7 - pelike; 10 - krater; 11 - karceion; 12 - kantharos; 13 - kylix; 14 - cotyla; 15 - kyathos; 16 - klix; 17 - rhyton; 18 - askos.

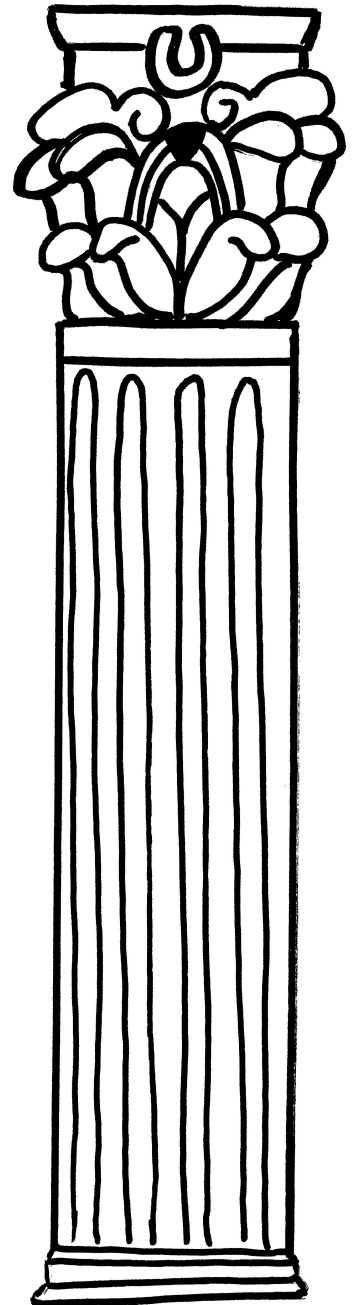
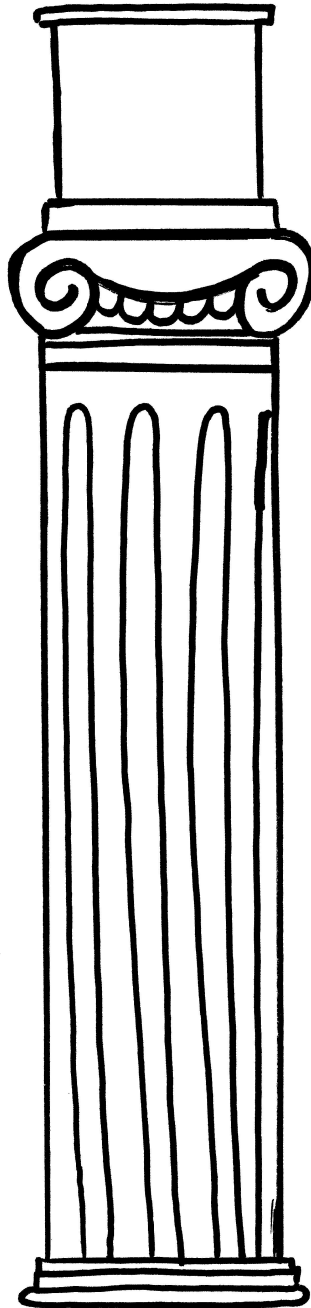
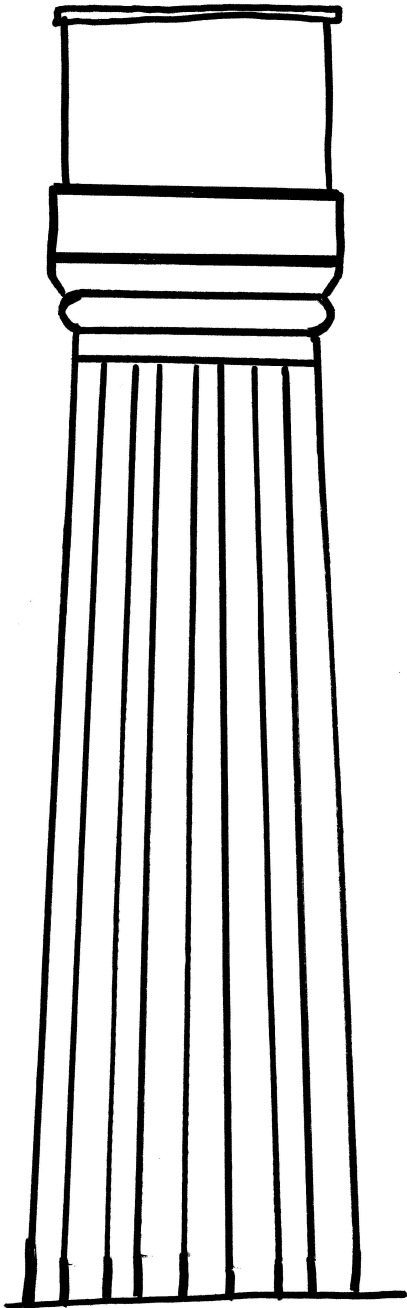
Greek Columns

Which is which? Match each name to the style of column with a line.

CORINTHIAN

IONIC

DORIC



ABOUT THE AUTHORS

Karen & Michelle . . .
Mothers, sisters, teachers, women who are passionate
about educating kids.
We are dedicated to lifelong learning.



Karen, a mother of four, who has homeschooled her kids for more than eight years with her husband, Bob, has a bachelor's degree in child development with an emphasis in education. She lives in Utah where she gardens, teaches piano, and plays an excruciating number of board games with her kids. Karen is our resident Arts expert and English guru {most necessary as Michelle regularly and carelessly mangles the English language and occasionally steps over the bounds of polite society}.

Michelle and her husband, Cameron, homeschooling now for over a decade, teach their six boys on their ten acres in beautiful Idaho country. Michelle earned a bachelors in biology, making her the resident Science expert, though she is mocked by her friends for being the *Botanist with the Black Thumb of Death*. She also is the go-to for History and Government. She believes in staying up late, hot chocolate, and a no whining policy. We both pitch in on Geography, in case you were wondering, and are on a continual quest for knowledge.

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