

Teacher's Companion™

for *Perseus*® 2.0

Greek Music & Dance

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AbleMedia



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Strategies for Using *Perseus* in the Classroom

I. How You Make a Good Start

Students' first impression of a software program has a lasting effect on their willingness to use the program. *Perseus* is no exception. While it is relatively user friendly, the volumes of information it contains can be overwhelming. To preclude the huge *Perseus* database from being intimidating, an instructor must teach students how to use the *Perseus* program. Students who are computer literate might easily grasp the mechanics of using the program, but they are unlikely to learn how to *think* with *Perseus* without careful instruction and practice. On their own, students are likely to learn how to use the basic menus and buttons in *Perseus* quickly but then begin to surf through the program in a random search for entertainment while actually learning very little. Exploration is vital, of course, but it will not get the assignment done; this takes skills that can be developed only through directed learning. So a student's first few encounters with *Perseus* must be structured.

II. How You Create a Learning Environment

"What are my objectives?" When you bring *Perseus* into the classroom you must have an initial set of objectives in mind. These objectives will evolve as you and your students become familiar with the program. It is important to set objectives at the outset because adjusting to using *Perseus* in the classroom is unlikely to be effortless. To achieve your objectives it is especially important that *you* become a good *Perseus* user. This includes being aware of possible glitches you may encounter in the program, in the classroom and with the your computer system. As you develop your approach to using *Perseus*, and learn how your students are inclined to use the program, your objectives will become more refined. They will also be more readily achieved. A good idea is to try to become familiar with the database along with your students. But avoid surfing. By learning how to use the database together in a disciplined manner, you can create a community learning infrastructure to which every one contributes knowledge and insight based on a foundation of mutual support and enthusiasm.

III. Acquiring the Resources You will Need

"What resources will I need to reach my objectives?" To do the job right, the hardware and software requirements are: basic configuration Macintosh LC or higher with at least 8 Mb of RAM, a hard disk, a color monitor and an Apple-compatible compact disk player, plus the appropriate connectors and power cables. The model (processor) of Macintosh you have determines the speed at which *Perseus* and other applications will perform their functions. *Perseus* requires an up-to-date version of Macintosh system software and the QuickTime™ system extension from Apple, which should be standard with System 7.0 or higher on your computer. *Perseus* 2.0 will ship with *Perseus* Player for use with the program. *Perseus* can be used over an AppleShare™, Novell™ or Tops™ network.

IV. Overcoming Limited Resources

"What if I only have one copy of Perseus?" So you only have one copy of *Perseus*, this is no reason not to make use of *Perseus* in the classroom. *Perseus* can aid you in your every-



day lessons both directly and indirectly. The most important thing to do is to make the most of what you have despite a lack of resources.

An indirect use of *Perseus* in your everyday lessons is to use *Perseus* for research that can be reworked into worksheets and information for distribution in class. You may then use your document as an example of the students themselves can do with *Perseus*. The *Knowledge Builder™*, "How to use *Perseus* with a Word Processing Program," teaches you how to take information from *Perseus* and organize it into a document. The documents and worksheets that you create may also include images. The print quality for *Perseus* images printed from a laser printer are very good.

There are quite a few ways to integrate *Perseus* directly into your daily lessons. The first method of integration is to actually have *Perseus* in the classroom. It is always best to orient your students to *Perseus* in a controlled situation. You using *Perseus* while it is projected onto a screen or wall is the most control you can have. It works best to create a Path or to have an organized series of steps made up prior to demonstrating *Perseus* in the classroom. You should be confident in each one of the steps in your Path or demonstration and in the use of *Perseus*. *Students smell fear*. If you are having trouble with the program this will lead others to believe that it is not user friendly. Once you have a lesson prepared then it is safe to begin using *Perseus* in the classroom. As you learn the program then it will become easier for you to simply move about without having practiced your moves.

V. Equipment you will need to use *Perseus* in the classroom

There are a few ways in which you can make *Perseus* more easily visible for your class when using the program in the classroom. One is to use a large computer monitor, this works fine in a small class but tends to alienate those in the back row of a large class. For a class of 12 students or less, a 27" or larger high resolution monitor works well. Otherwise it is best to use some kind of projection system. The least expensive type of projection systems is an LCD (liquid crystal display) panel and an overhead project. If you use a panel, make sure that it is an active matrix panel. These are more expensive than passive matrix panels, but are capable of showing animation and video. It is best to have an overhead whose light runs at least 4000 lumens. A shoddy overhead project with a dim bulb will ruin the images from even the best LCD panel.

One step above the LCD panels are digital color projectors that are basically the LCD panels with a light source included. And even better than these are the 3-tube video projectors. If all courses using *Perseus* can be held in the same room it is recommended that a 3-tube video projector be permanently mounted from the ceiling of the classroom used for computer demonstrations. The three-tube video projectors provide much better image quality than the majority of the LCD panels and projectors.

An alternative to projecting is to use a large, high resolution monitor and a videodisk player to show images. To use the *Perseus* videodisk in tandem with the *Perseus* CD-ROM, it is necessary to have a video monitor (any color video monitor that can be



connected to the videodisk player will work), a videodisk player, and the appropriate cables to connect them to each other and to the computer. *Perseus* 1.0 includes the driver to run the videodisk right from the Macintosh. *Perseus* 1.0 will support these videodisk player models: Pioneer 4200, 6000A and 6010A, Sony 1500, 2000 and LDP 1200, and Hitachi 9550. The videodisk player will allow you to show all images and motion video on the *Perseus* videodisk but you will not be able to show any of the site plans and architectural plans since the videodisk does not contain them. Digitized images do have better resolution than the video images but the projection setup you choose depends, of course, on the resources you have available.

VI. Demands on You as the Instructor

“What resources should I provide to my students?” Your students’ foremost requirement is for a good instructor: *you*. Don’t be hesitant about this. Resources are available to help you quickly become a first rate instructor by letting you learn how to use *Perseus* as your students are learning. You should spend somewhere between one and two hours teaching students how to use the program. Then you move to structured assignments that allow them to use *Perseus* successfully.

VII. Demands on Your Community

“What kind of support should my school offer my students?” Number one on the list should be User Support. This may mean that you are available to help when students are using the program independently and/or it may mean having the ready support of other students who are particularly adept at using the program. Maybe it will be necessary only to educate the computer gurus in charge of the lab how to use the program so that they can be called on for help; or it could mean simply having reference materials readily available to the student who gets stuck. Students who are left without some sort of support will more frequently feel lost and frustrated than those that have some kind of support. Recovery from a sense of disorientation takes time and will not have a completely detrimental effect on the student’s *Perseus* experience but will most certainly do damage. Prevent disorientation and the “I hate *Perseus*” syndrome, provide some kind of user support.

VIII. Build Your Students’ Confidence

There clearly is an order in which students should learn how to use *Perseus*. First, the student should learn the database tools and Links. This can be interesting because it can be done while they are learning about ancient Greece, its art and archaeology and its literature. With a carefully structured introduction to the mechanics of using *Perseus*, you will avoid students fumbling through the program and becoming disoriented by the voluminous information packed in it. Confidence built by a good start will prepare students to explore the program on their own successfully and demonstrate to them how they can make discoveries on their own through the projects and exercises you assign. They should recognize that *Perseus* does not have all the answers but has clues to solving the problem at hand. *Perseus* is just a big screw driver, a tool to help them construct a solid argument. They are the ones who construct the argument and make discoveries using the tools they have available.



Work up to an encounter with large amounts of information. For instance if you perform an English Word Search for the word "Zeus" in all the Links, *Perseus* will list 2320 citations. If a new user had to sift through all this information the pain and frustration would only be detrimental. An intermediate user has the skills to filter through all this information and to find the relevant facts.

Provide students with the knowledge that the skills they learn by using *Perseus* are invaluable. The ability to filter out usable information is a necessary skill for succeeding in college or any job. Tools like *Perseus* have been or are being developed for many different subjects so the skills students learn are practical and may be applied to programs and databases in other subjects.

IX. Group Assignments to get things Rolling

Since we all do not follow the same train of thought each individual will use *Perseus* differently. This can lead to interesting results and discoveries. It can also lead to some students becoming bogged down by the tremendous amount of information available in the database. Solve this problem by having the students work in groups or pairs initially since two heads may be better than one. Prevent tension within these groups or pairs by having them evaluate each other and themselves in regards to how much work each person did on the project. Base the overall grade on the final product, the rating of a group's members by other members and the individual's perception of their own work. Once the students have completed a few simple *Perseus* exercises and a group project, they will be more comfortable using the program on their own for research.

X. What you should anticipate

In terms of problems with the computer system expect the unexpected. Each computer has its minor quirks that hopefully you will never encounter. To make sure *Perseus* runs smoothly check the following things:

- All cords are connected properly.
- All the necessary software is installed properly. (Follow the installation directions in the *Perseus* User's Guide.)
- Check that Perseus Player is set to run at least 4000K if you have more than 8 Mb of RAM available on your computer. If you have more than 12 Mb of RAM, *Perseus* 2.0 will run great if Perseus Player is set at 6000K.
- Make sure that there is only one copy of Perseus Player on your hard drive.

On the human side, expect some students to use the program for each and every assignment. Expect other students not to use the program unless required. It is not that students are afraid of the program, as long as they have the proper training and support, but that some students feel more comfortable using other means to reach their ends. Be clear about the desired outcome of a project. Periodically check on students' progress, especially with their first independent assignment, to make sure that they are not lost or have not gone off on some tangent.



XI. What's Ahead

The remainder of this *Teacher's Companion* covers information on a specific topic. You will find suggested assignments for use at both the high school and college levels. These assignments may be altered to be longer or shorter and to be done as an in-class assignment or a take home project. You will also find suggestions for what to do if you have limited resources and computers. The suggestions will help you to create a participatory or interactive classroom activity when only one copy of *Perseus* is available.

Lastly, the Appendix provides sample exercises and keys for model assignments that may be used as structured introductory, intermediate and advanced assignments. Enjoy using the database. It is only a tool and can never replace a teacher. Teachers are the key to learning and to making the most of the information available to students by bringing insight to the unknown and newly discovered.



Music and Dance

Prior to using *Perseus*: Exposure to the Greek Alphabet

If you intend to use *Perseus* in the classroom or to have your students use *Perseus* for research at the beginning, middle or end of an unit or course, it is best to expose them to the Greek alphabet. Exposure through transliteration will allow students to make better use to the database without fearing the Greek words they will run into.

In connection with music and dance, students should examine the Greek words that have been transliterated into English, often via Latin. Either in class or as an out-of-class exercise, have students turn the following words into would they believe to be the proper Greek spelling. Students should be supplied with a transliteration chart such as the one below. Once they have what they believe to be a Greek spelling have them check the spelling with the real Greek found by performing a search for each word in the English-Greek Word List in *Perseus*.

WORDS TO LOOK UP: *kithara, lyre, satyr, bariton, Polyhymnia, Calliope, poet, tragedy, muse, aulos, Orpheus.*

A. α	a	alpha	I. ι	i	iota	P. ρ	r	rhô
B. β	b	beta	K. κ	k	kappa	Σ. σ. ς	s	sigma
Γ. γ	g	gamma	Λ. λ	l	lamda	T. τ	t	tau
Δ. δ	d	delta	M. μ	m	mu	Υ. υ	u	upsilon
E. ε	e	epsilon	N. ν	n	nu	Φ. φ	ph	phi
Z. ζ	sd	zeta	Ξ. ξ	xi	x (sk)	Χ. χ	k-h	chi
H. η	e	eta	Ο. ο	o	omicron	Ψ. ψ	ps	psi
Θ. θ	th	theta	Π. π	p	pi	Ω. ω	ô	omega

When You Only Have One Copy of *Perseus*

With the right preparation any of the exercises suggested can be done in the classroom with a single copy of *Perseus*. The exercises can also be revised, shortened or lengthened, for out-of-class projects. Professors and teachers alike have recommended a sign-up procedure be put in place when a single copy of *Perseus* is available. Students should be instructed on the use of *Perseus* prior to sitting down to use the program and some kind of support should be available when they use it on their own.

The computer on which students will do their research should be easily accessible. It should also be designated or prioritized as the "*Perseus*" computer to avoid conflicts in its use. Try some of the following assignments in the classroom. Review each step that you will perform before you try it in front of an audience.



Assignment Suggestions

Time Line

The construction of a time line is an excellent orientation tool to what happens in an epic poem, myth or historical period.

Artistic Assignment

How often are students in a history or language class asked to be artistic? Art plays a major role in all aspects of ancient Greek studies. It was and is a medium of education. Close examination of the art from the past may teach a student more than she/he can learn from a book or lecture. Students can design their own vases, sculptures or coins relating to their chosen or assigned topic.

Open Ended Discussion

What issues faced the ancient Greeks that are not of relevance to us today? What issues are relevant to people now and then? Come up with some questions that have no real answer and create a dialog between those in the class.

Word Analysis

Students do not have to know Greek to make use of the English to Greek Word Search. The appearance of the word in question in a definition found in the Greek-English Lexicon offers clues to its true meaning or to what the Greeks really meant by its use.



Art & Literature Comparisons

Sophocles' plays were social commentaries but did you ever think that a vase could serve the same purpose? After reading Sophocles' *Ajax*, a comparison to what happened in the play in regard to Achilles' armor and Ajax's suicide, was made between the text and vases that depict the scenes from the play. The play describes Ajax falling on his sword to take his own life but a vase depicts Ajax stabbed through the back with his sword. What is the painter trying to say with this depiction?

Family Trees

If you were to look at the Encyclopedia entry for any god or goddess, mythical or historical figure you would find notes describing their origin and offspring. From these Encyclopedia entries family trees are easily constructed.

Atlas Assignment

Ancient Greek literature is filled with place names. References to sites where mythological births, deaths, travels or conflicts occurred are numerous. The Atlas is an excellent tool with which students may become familiar with the places and geographical areas from myth and literature. Combing the Atlas' maps with actual site images will enhance students' understanding of the world in which heroes lived and died, gods decided men's and women's fates and people went about their daily lives.



Assignments

These assignments serve many purposes. They are exercises in research, the use of specific *Perseus* Links, word analysis and evaluation of information both textual and visual. The topic of each exercise can be changed without having to alter or write a new assignment. Because of the amount of information and its accessibility in *Perseus*, high school students and undergraduates will be able to do these assignments at a level previously achievable only by graduate students and professors.

The Function of the Muses

Poets, bards and musicians alike evoked the “Muse” to sing or play through them as the agent of her art. An artist’s work was not his own but a gift bestowed upon him by the “Muse.” The Greeks believed that there were nine Muses, the daughters of Zeus and Mnemosyne (Memory). Students should investigate the Muses to discover just what they represented. They should create a chart like the one below.

Below is a chart of the Muses and the arts that they represented.

<u>Muse</u>	<u>Art</u>
Calliope	Epic Poetry
Clio	History
Euterpe	Lyric Poetry
Melpomen	Tragedy
Terpsichore	Choral Dance
Erato	Love Poetry
Polyhymnia	Sacred Music
Urania	Astronomy
Thalia	Comedy

Textual References to the Muses

Aristophanes, *Birds* lines 737-751, 769-783 - The chorus sings with the Muse reciting “tioticotinx” and their song. The “tioticotinx” is a sweet song honoring Cybele.

Aristophanes, *Birds* lines 909-910, 913-914 - A poet calls himself a slave to the Muses just like Homer.

Aristophanes, *Peace* lines 775-795 - the Chorus ask the Muse to drive war from their city.

Bacchylides, *Ode 3*, line 71 - Refers to the violet haired Muses.

Bacchylides, *Ode 9*, line 5 - Refers to the violet-eyed Muses.

Bacchylides, *Ode 13* line 220 - Refers to the crimson headdresses of the Muses.

Euripides, *Rhesus*, et. al. - A Muse is the mother of Rhesus who comes to mourn her son’s death and to curse those at Troy who caused it.



Pindar Nemean 9.55 - Pindar hopes to be the poet who sings the best victory song for the victor. In doing so, he throws his shaft closest to the mark of the Muses just like the competitor he writes about.

Pindar Nemean 10.26 - Pindar refers to the composing and singing of victory songs as plowing a field. The victor provided the Muses three fields to plow having won three times.

Pindar Isthmian 2.1 - The Muses not only sing for a victorious athlete but also sing for a handsome man who rouses feelings of Aphrodite.

Pindar Isthmian 2.6-10 - Once upon a time the Muse did not work for money but now with a victory song to sing Pindar thinks she understands to work for gain now.

Pindar Isthmian 7.23 - Pindar refers to the Muses as violent haired.

Pindar Olympian 6.23 - Pindar speaks of the Muses as "honey-voiced."

Homeric Hymn 25: To the Muses and Apollo - This hymn thanks the Muses and Apollo to providing man with the gift of song.

Plato, Cratylus 406a - Plato writes on the origin of the name for the Muses.

Plato, Ion 534c-534e - In this passage, Plato explains how the Muse works in a man and possesses him so that he writes in a certain genre and another man chooses another. He attributes the differences of genre and abilities to write in certain genre as divine intervention, because God makes him do it. Plato supports this premise by offering the example of Tynnichus who all at once wrote what of the best poems of Plato's time after writing many unmentionable ones.

**Plato writes about the Muse in man in a number of his works. Students may want to investigate the role of the Muse in Plato's text.*

The Muse is invoked in the first lines of text of Homer's *Odyssey*.

Homer Odyssey Book 1, line 1 - "Tell me, O Muse, of the man of many devices, who wandered full many ways after he had sacked the sacred citadel of Troy."

The importance of the Muses can be seen at the beginning of *Theogony*. Hesiod attributes all singing to them and addresses them directly in **lines 1-116**. On **line 22** of the *Theogony*, the Muses teach Hesiod to sing.

The Muses in Art

London 1971.11-1.1 - Five Muses can be seen in this portrayal of the wedding procession of Peleus and Thetis. Students should look at the view "Upper frieze: wedding of Peleus and Thetis: Aphrodite and Ares in chariot, Muses behind horses."

Florence 4209 - Calliope plays the Pan-pipes and Urania holds her left hand in the air. Students should look at the view "Main frieze, chariot of Hera and Zeus, Muses."

Munich 2362 - A Muse holds a lyre and Apollo approaches.

Munich Shoen 80 - Two Muses on Mount Helicon, one sits and one stands.

Boston 00.356 - Apollo stands next to a Muse.

Boston 98.887 - A cowherd sits surrounding by six Muses.

Athens, NM 216 - Three Muses appear together in sculpture. They hold scrolls and a double pipe in the Athens 216 sculpture.



Family Tree

Using the information found in the *Perseus* Encyclopedia and text (see examples below), students should construct a family tree for the Muses like the one below. Separate trees may need to be created to include all the relevant family members. Student should devise their own symbols that denote: relation, unknown parentage, sex, etc.

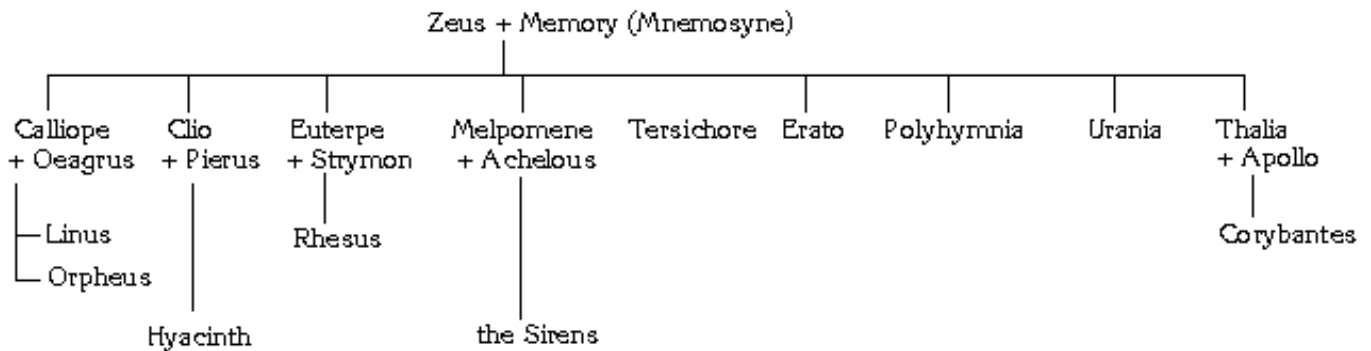
Aristophanes *Frogs*, line 875 - Refers to the Muses as the nine daughters of Zeus.

Apollodorus, Book 1, section 3.1 - Refers to Zeus and Memory as the parents of the Muses.

Hesiod, *Theogony* lines 53-62 - Hesiod tells the story of the union of Zeus and Mnemosyne that produced the Muses.

Pausanias, 9.29.1-6 - Refers to Zeus and Memory as the parents of the Muses.

Plato, *Theaetetus* 191D - Refers to Memory as the mother of the Muses.



Musical Instruments

To gain an understanding of ancient Greek music and its traditions it is best to learn the vocabulary associated with it. The *Perseus* Encyclopedia provides a list of all relevant words associated with music in one place. Students should use the Subject Index for Musical Instruments in the Encyclopedia to research ancient Greek musical instruments. They should also use the English Index and Browser to find images and textual references to ancient Greek musical instruments. Summaries of the Encyclopedia information, like the ones below, should be written.

Lyre

To the layman a “lyre” is a single instrument but the word describes a family of instruments whose origin is a result of divine inspiration. The lyre family consist of ancient Greek stringed instruments with strings of equal length. The word “*lyra*” can describe a kithara, a *chelys-lyra*, a *phorminx*, and a *barbitos*. No lyre survived into modern times due to the fragility of the material of which they were made.

Students should investigate the “lyre,” the family of stringed instruments that appear on the vases and sculpture in *Perseus*.

Harvard 1960.236 - The images on this vase show the difference between a kithara and barbitos.

Harvard 1960.343 - Orpheus and woman clutch a lyre.

Malibu 86.AE.290 - The image of the lyre for this vase shows that it is a real tortoise shell lyre.

Other vases on which a lyre appears: Amherst 1962.74, Berlin F 2160, Berlin F 2285, Berlin F 2291, Boston 13.194, Boston 95.27, Hamburg 1900.164, Harvard 1895.248, Harvard 1925.30.40, Harvard 1925.30.42, Harvard 1959.188, Harvard 1960.343, Kansas City 33.3/2, Louvre G 416, Malibu 86.AE.290, Mississippi 1977.3.114, Mississippi 1977.3.96, Philadelphia 31-19-3, Philadelphia MS2445, Philadelphia MS5465, Philadelphia MS5466, Tampa 86.27, Tampa 86.79, Tampa 86.84, Tampa 86.89, Tampa 86.96, Toledo 1964.126, University of Chicago 1967.115.64, Wurzburg L 481, Wurzburg L 507, Wurzburg L 521, Wurzburg L 541, Yale 1913.111.

Pindar, *Pythian Ode 1.1* - Refers to the “golden lyre to whom dance steps listen.”

Homeric Hymn 4: To Hermes - This hymn tells how Hermes made the first lyre and how he gave it to Apollo as a gift.

Barbitos

The *barbitos* is another Greek-string instrument. It was first mentioned in the archaic lyric poetry of Alcaeus, Bacchylides, Simonides and Sappho. The *barbitos*' use was not confined to high art, it also saw use at drinking parties and at festivals. The Encyclopedia entry for *barbitos* says that Aristotle believed the *barbitos* to be for pleasure and not for educational use.



Munich 2416 - This vase depicts Alcaeus and Sappho holding a *barbitos* presumably for accompaniment.

Kithara

The *kithara*'s name is derived from the Homeric word "kitharis." The *kithara*'s soundbox is triangular in shape and is hollow. Typically the *kithara* had seven strings stretched from the cross bar to the center of the soundbox. Dionysos and his followers and Herakles play the *kithara* accompanied by the double pipes.

Athens 215 - In this sculpture, the contest of Apollo and Marsyas is depicted. Apollo plays the *kithara* and Marsyas plays the double pipes. Apollo sits while playing the *kithara*.

Coins on which a kithara appears: Dewing 589.

Baltimore, Hopkins AIA B10 - In this Dionysiac procession, a maenad plays the kithara and dances.

Worcester 1966.63 - Herakles strums his kithara while Athena and Hermes look on.

Other vases on which the kithara appears: Austin 1980.63, Boston 26.61, Cleveland 76.89, Louvre G 1, Madison 1979.122, Munich 1416, Philadelphia MS4841, Tampa 81.5.1, Tampa 86.44, Worcester 1956.83.

Flute

The flute was known by two names, *aulos*: a flute played using a mouthpiece, and *lotus*: a North African wood from which flutes were made. Strabo mentioned another type of wind instrument comparable to the Pan-pipes, *syring*. Pausanias tells us that there were three types of flutes used to play regional music, the Dorian, the Lydian and the Phrygian. The flute was played in processions and while the Spartans marched into battle. Athena once threw the flute away in disgust and Marsyas picked it up.

London E 171 - This vase depicts a music lesson. Youths play flutes and the tutors hold lyres.

London E 270 - A flute player.

Louvre G 103 - On this vase, a flute-player bows as he steps up onto the performance platform.

Philadelphia MS4832 - Three men play a concert. The man playing the flute is comical as he stands sticking out his large belly.

Other vases on which flutes appear are: Austin 1980.32, Baltimore, Hopkins AIA B10, Berlin F 2285, Berlin F 2309, Berlin inv. 1966.19, Boston 00.339, Boston 10.202, Champaign 70.8.6, Harvard 1925.30.40, Harvard 1925.30.42, Harvard 1960.346, London E 241, London E 270, London E 38, Louvre G 103, Louvre G 135, Mississippi 1977.3.96, Munich 1416, Munich 2088, Munich 2646, Munich 8935, Philadelphia L-64-540, Philadelphia MS2464, St. Petersburg 644 (St. 1670), Tampa 86.93, Wurzburg L 481.



Aristophanes, *Birds* line 223 - The flute is used in the play to imitate the song of the nightingale.

Aristophanes, *Clouds* line 310 - The chorus refers to spring bringing the Dionysian dancing with flute music.

Aristophanes, *Frogs* line 1315 - Aeschylus speaks of the flute-loving dolphins and grapes on the vine, all in reference to Dionysos.

Aristophanes, *Wasps* line 581 - Aristophanes refers to a leather strap worn like a halter around a piper's lips to aid in blowing.

Euripides, *Electra* line 715 - The chorus refers to the flute as the "handmaid" or "waiting-man" of the Muse's song.

Herodotus, *History* 17.1 - Alyattes marched his army to sound of "pipes and harps and bass and treble flutes" when he attacked and besieged Miletus.

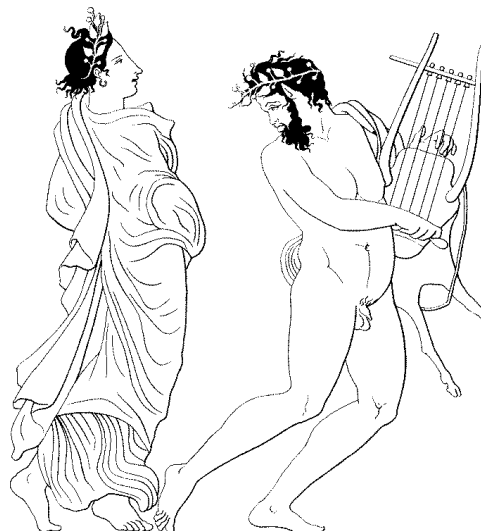
Pausanias, *Guide to Greece* 2.31.3 - At Troezen, the people believe that the flute was invented by Ardalus, the son of Hephaestus.

Pausanias, *Guide to Greece* 2.7.9 - This passage discusses the defeat of Marsyas. Following his death, a river carried the flutes to the Maeander and eventually they were washed ashore in the Sicyonian territory and given to Apollo by the shepherd who found them.

Pausanias, *Guide to Greece* 2.22.8-9 - Sacadas was the first to play the Pythian flute-tune at Delphi. The hostility of Apollo towards flute-players lasted since the rivalry of Marsyas the Silenus. This hostility continued, Pausanias says, because of Sacadas.

Pausanias, *Guide to Greece* 9.12.5 - Pronomus was famous for his flute playing. He created a flute that played the Dorian, Phrygian and Lydian melodies equally well thus eliminating the need for three different types of flutes. "It is also said that he gave his audience untold delight by the expression of his face and by the movement of his whole body."

Plutarch, *Alcibiades* 2.4-2.5 - Plutarch claims that Alcibiades refused to play the flute as this "ignoble and illiberal" instrument disfigures a person's face when played.



Dancing Scenes

Dancing scenes were a favorite iconographical subject for ancient Greek vase painters. Many vases will depict dancing satyrs, mythical male beings. Satyrs are most often found dancing in a procession of Dionysos, the god of wine. Men and women, alike danced at symposia on many vases. Students should look closely at dancing scene. From their investigation they should put together drawings of dance steps. Students may want to try to recreate these dances and present them in class.

Baltimore, Hopkins AIA B12	Bearded satyr dancing.
Boston 95.27	Men dancing to flute music,
Berlin F 2290	Maenads dance around an image of Dionysos.
Boston 00.499	Dancing satyrs and maenads.
Boston 1971.343	Dancing satyrs.
Boston 76.41	Dionysos with dancing maenads.
Boston 98.916	Four naked male dancers.
Cleveland 30.104	A procession and men and youths dancing.
Columbia 69.111	Satyrs dance around a tree.
Florence 4209	Theseus dances.
Harvard 1925.30.133	A naked komast dances with women.
Harvard 1959.189	Maenads dancing.
Jacksonville AP.66.21	Dionysos stands between dancing satyrs.
London E 241	A woman dances while another flutes.
London E 38	Girl in leopard skin dances to flute music.
London E 768	Satyrs dancing.
London E 804	Women dancing, possibly a scene from <i>Clouds</i> .
Munich 2645	Dancing maenads.
Malibu 86.AE.70	Naked and draped men dancing.
Malibu 86.AE.75	Dancing men.
Malibu 86.AE.187	Dancing men.
Malibu 86.AE.280	A reveler dancing.
Malibu 86.AE.292	Revelers dancing.
Malibu 86.AE.293	Revelers dressed as women dancing.
Malibu 86.AE.296	Old men, dressed as women, dancing.
Malibu 86.AE.682	Men dancing and drinking.
Mississippi 1977.3.58	Dancing maenads.
Mississippi 1977.3.74	Men and youths dancing.
Mount Holyoke 1967.BS.II.11	Woman playing krotala and dancing.
Munich 2645	Dancing maenads.
Philadelphia L-64-540	Revelers dancing to flute and castanets.
Philadelphia MS2445	Three singing and dancing men.
Philadelphia MS2489	Three nude youths dancing.
Philadelphia MS3497	A dancing satyr.
RISD 23.300	Dancing birds.
Toledo 1964.126	Singing and dancing man and youth.
Villa Giulia 909	Women dancing.



Wurzburg L 164
Wurzburg L 265
Wurzburg L 526
Wurzburg H 5352
Yale 1913.102

Silens and nymphs dancing.
Silens and nymphs dancing.
Dancing satyrs.
Dancing silens.
Three men dancing.



Create a Vase

As a result of an examination of the dancers on vases above, students will be able to design their own dance vases. A line drawing or sketch should accompany the answers to the following questions about Greek dance. The use of Links beyond the use of the Object Keyword search will be necessary to complete this assignment. Use the vase outline below as your template.

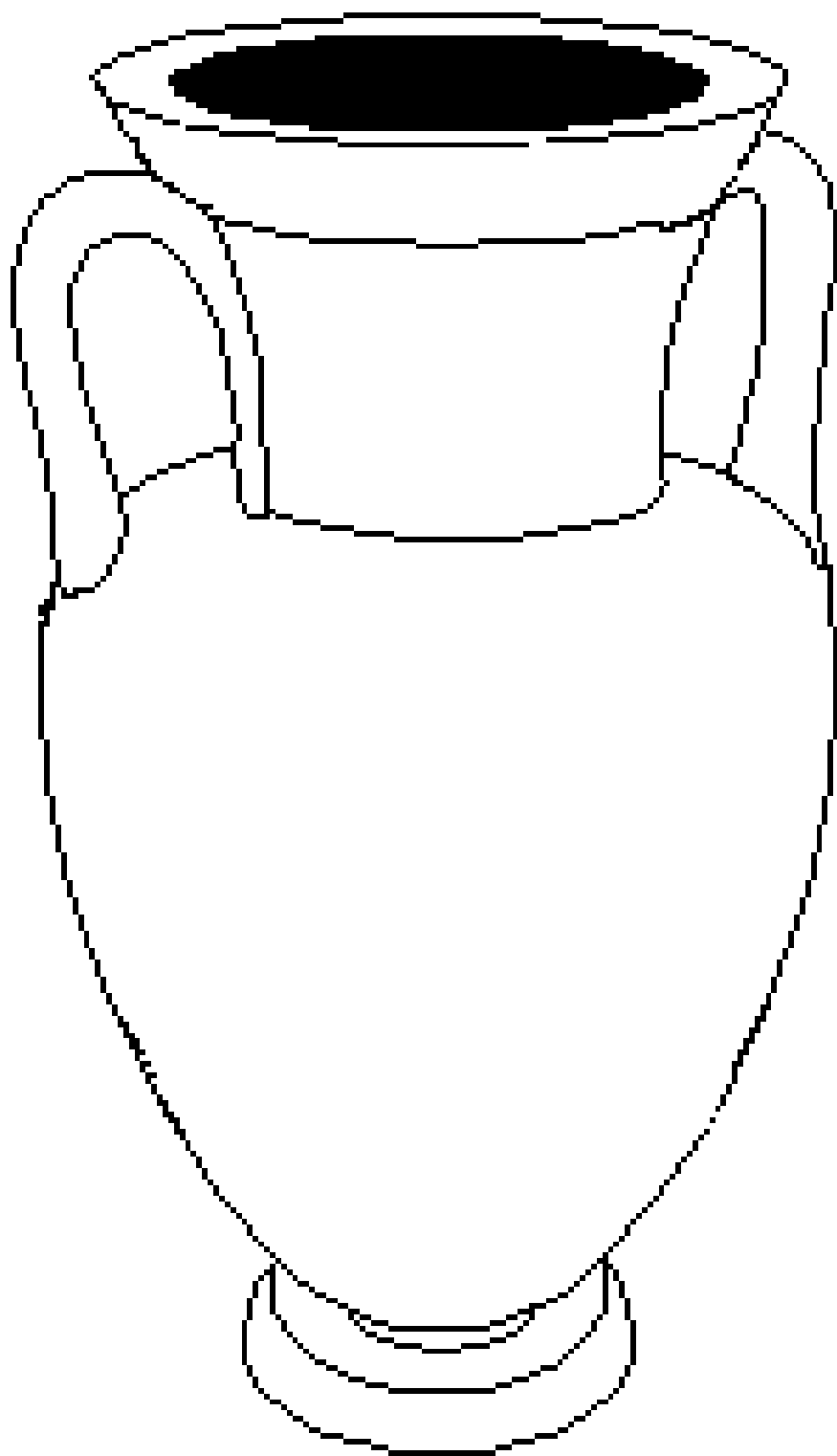
Questions

1. Who are the dancers on your vase?
2. Do the musicians dance as well?
3. Where are they performing?
4. What do they carry in their hands?
5. What are they wearing and why do they wear this?
6. Do dancers touch one another when performing?
7. What period is your vase from?

Possible Answers

1. Revelers, maenads, chorus.
2. It is possible for the musicians to dance.
3. Outside, at a symposium, in a theater, Odeion.
4. Wine cups, branches, instrument, staff, etc.
5. Men are dressed as women, nude men, chitons, earrings, sandals, etc.
6. No.
7. Archaic, Early Classical, Classical.





Music in the Military and Work

Music was not simply played for fun and festival or competition. It had other uses such as an accompaniment to work. Students should investigate the use of music in war and in work. Below are some examples of the uses of music in the two venues. Students should begin their investigation with these examples and then expand their research.

Music in Work

Homer *Iliad* 18.572 - Homer speaks of a flute player piping a tune to which men rhythmically stomped grapes.

Pausanias *Guide to Greece* 4.27.7 - The Messenian men worked to music composed by specific men, the tunes of Sacadas and Pronomus, and only music from Boeotian and Argive flutes.

Plutarch, *Alcibiades* 32.3 - Plutarch says that Duris the Samian, claiming decendency from Alcibiades, told of how the Alcibiades' oarsmen rowed to the flute music by Chrysogonus and that the rowers kept time to "a rhythmic call from the lips of Callipides the tragic actor."

Music in War

Euripides, *Hecuba* line - Hecuba refers to the "ill-omened pipes" whose sound the Greek ships rowed to Troy.

Herodotus, *History* 17.1 - Alyattes marched his army to sound of "pipes and harps and bass and treble flutes" when he attacked and besieged Miletus.

Pausanias *Guide to Greece* 3.17.5 - The Lacedaemonians used to go out to fight, not to the sound of the trumpet, but to the music of the flute and the accompaniment of lyre and harp.

Plutarch, *Lysander* 15.4 - Lysander sent for many flute-girls to play while the Spartans tore down the walls and burned the triremes of the Athenians.

Thucydides *History of the Peloponnesian War* 5.70.1 - In this passage, Thucydides relates how the Spartans used music to keep their march time steady so as not to break their ranks by chaotically rushing into battle.



Who Played Music

The realm of music was restricted to men and boys in the proper sense. Women did participate in musical exploits but not at the level of respectability shared by men. Students should look at who played music, what instruments they played and the attitudes toward musical performance by men and women. Below is a list of vases, sculpture and text that relate some information on this subject. Students may want to begin with these.

Women

Aspasia, Encyclopedia entry - Aspasia, a *hetaira*, is known to have been educated in the art of musical entertainment as well as singing and dancing. Traditionally women were not educated in the same subjects as men with some exceptions.

Historical Overview, 11.1.5 Prostitutes and "Companions" - This topic card discusses the fact that prostitutes knew how to play musical instruments.

Baltimore, Hopkins AIA B10 - In this Dionysiac procession, a maenad plays the kithara and dances.

Apollodorus Epitome 7.18 - The Sirens played the lyre, sang and played the flute to persuade passing mariners to tarry.

Boys

Kithara, Encyclopedia entry - Plato and Aristotle seem to disagree on whether the kithara is a proper instrument for use in educating the youth of ancient Greece.

Aristotle, Politics 1338a - Aristotle talks about boys playing the lyre; says it's good because even Odysseus played it.

Malibu 86.AE.290 - A boy plays tortoise shell lyre.

Homer, Iliad 18.565 - Children danced and a boy played the lyre and sang a Linos-song while the children pounded out a beat with their feet.

Men

Worcester 1966.63 - Herakles strums his kithara while Athena and Hermes look on.

Athens 215 - This sculpture depicts the musical contest of Apollo and Marsyas.

Apollodorus 3.5.5 - Hermes had given Amphion a lyre.

Apollodorus 3.10.2 - Hermes makes the first lyre as a baby. He gives the lyre to his brother, Apollo.

Pausanias Guide to Greece 9.5.7 - The two brothers, Zethus and Amphion, fought over Amphion's addiction to music. Zethus deemed playing music to be faint-hearted and wished that his brother would follow a career in agriculture, cattle-breeding or war. Amphion ceased playing the lyre.

Pausanias Guide to Greece 8.38.10 - Pan discovered the pan pipes.

Plato, Laws 670a-b - The Athenian believes, "that all men of over fifty that are fit to sing ought to have a training that is better than that of the choric Muse. For they must of



necessity possess knowledge and a quick perception of rhythms and harmonies.”

The Gods

Homeric Hymn 4: To Hermes - This hymn tells how Hermes made the first lyre and how he gave it to Apollo as a gift.

Austin 1980.63 - Nike depicted with a lyre on Attic vases.

Euripides, *Helen* 1345-1351 - “Then Kypris, fairest of the blessed gods, first took up the rumbling voice of bronze and the drum with tight-stretched skin; and the goddess smiled, and received in her hand the deep-toned flute, pleased with its loud note.”

**There are numerous other instances of the gods performing music. Students should use the Browser and English Index to discover these instances.*



Music as part of Education

Formal education, such as rhetoric and writing, was mainly the realm of men and boys. An investigation of the importance of musical training in education may be done starting with the following citations. Student should also look outside *Perseus*, to secondary sources, to gain a better understanding of the importance of music in education.

Malibu 86.AE.290 - This vase shows the educating of young boys in the use of the lyre. Notice that the scenes depicted on the vase are educational scenes so they include the tutor, the instrument a boy would learn to play and *aryballoi* and sponges used during exercise.

London E 171 - This vase depicts a music lesson. Youths play flutes and the tutors hold lyres.

Historical Overview, 11.2.1 Schools and Teachers - As part of a traditional education, teachers taught their students how to sing and play musical instruments.

Homer *Iliad*, Book 9 - Homer describes how Achilles plays the lyre to pass the time. This demonstrates that Achilles had the traditional music training like most Greek boys. His training varied some from the norm since he was trained by the centaur, Chiron.

Kithara, Encyclopedia entry - There is some disagreement between Plato and Aristotle as to the appropriateness of the *kithara* as an instrument on which to train proper youths.

Aristotle, *Politics* 1341a-b - Aristotle says the flute is not an educational instrument since "the flute is not a moralizing but rather an exciting influence, so that it ought to be used for occasions of the kind at which attendance has the effect of purification rather than instruction." He adds that the flute does not allow the student to speak and therefore is anti-educational. Aristotle uses the example of Athena's tossing the flute away in disgust because it distorted her face when she played it. Athena is the goddess of science and art, Aristotle says, and found no intellectually stimulating properties in the flute that would merit its use in a proper education.

Plato, *Laws* 654b - Plato, in a discussion between an Athenian and Clinias, assumes that an educated man has choir training and that an uneducated man does not.

Plato, *Laws* 670a-b - The Athenian believes, "that all men of over fifty that are fit to sing ought to have a training that is better than that of the choric Muse. For they must of necessity possess knowledge and a quick perception of rhythms and harmonies." Music education continued into middle age as the responsibilities of the player or singer changed.

Plato, *Phaedrus* 245a - The music of the Muses, stories and sung poetry, educates later generations in the inspirational deeds of their ancestors.



Music and Dance as part of Religion

Music and dance played important roles in the rituals of the ancient Greeks. Students should investigate the role of music in sacrifice and prayer. They can begin with the citations below. After their investigation they should answer the question posed here or one that you create.

Epidaurus, Site Description - At some time around 380 BC, the Greeks added poetry and music contests to the competition at Asclepian games.

Parthenon Frieze, Description - During the Panathenaic procession, men carrying instruments.

Historical Overview, 10.1.5 Occasions for sacrifice and festivals - Panathenaic festival honored Athena with contests in music and dancing.

Historical Overview, 10.1.5.1 Large Animal Sacrifice - Musicians played a flute while an animal was sacrificed.

Apollodorus 3.15.7 - Minos, while sacrificing to the Graces, heard of the death of Androgeus, his son, he stopped the music of the flute. From that day on sacrifices to the Graces in Paros were performed without flutes and garlands.

Aristophanes, Peace line 530 - Trygaeus sings of the Dionysia where tragic poets perform and the flute plays in honor of the god.

Herodotus History 1.132.1 - Persians do not use music in sacrifice.

Pausanias Guide to Greece 10.7.4 - "Lamentations were sung to the flute and flute playing and singing to flute were banned at Pythian games since thought ill-omened."

Pausanias Guide to Greece 8.38.8 - After the sacrifice of a boar to Apollo Helper the boar is carried the victim to the sanctuary of Parrhasian Apollo as someone played music on a flute.

Plato, Ion, Note 534a (1) - "The Corybantes were priests of Cybele or Rhea, mother of Zeus and other Olympian gods, and she was worshipped with wild music and frenzied dancing which, like the Bacchic revels or orgies of women in honor of Dionysos, carried away the participants despite and beyond themselves."

Plato, Laws 815e - Plato describes the level of body movement in relation to excitement and bliss.

Sophocles Trachiniae 640 - The flute will play divine song of joy.



Notorious Dancers & Musicians

Dancers and musicians in ancient times, like in modern times, gained notoriety and respect from their audiences. Some felt that they could challenge the gods with their talents. Students should investigate notorious and infamous dancers and musician in ancient times. They should find out if any were exile, ban or killed because of their behavior. Students may want to compare the fame found by Greek performers to that found by Roman performers.

Aristophanes, *Archarnians* lines 15-16, Note - Dicaeopolis says, "But recently I died and went to hell, when Chaeris played the Anthem on his flute." Henderson's note tells us, "The comic poets considered Chaeris a bad flautist and lyre-player."

Aristophanes, *Peace* lines 950-955 - Aristophanes makes another reference to Chaeris and his "puffing and out of breathe" playing.

Pausanias *Guide to Greece* 9.12.5 - Pronomus was famous for his flute playing. He created a flute that played the Dorian, Phrygian and Lydian melodies equally well thus eliminating the need for three different types of flutes. "It is also said that he gave his audience untold delight by the expression of his face and by the movement of his whole body."

Pausanias *Guide to Greece* 9.29.6 - Apollo killed Linos for being his rival in singing.

Herodotus *History* 1.23.1 - "Arion was a lyre-player second to none in that age; he was the first man whom we know to compose and name the dithyramb which he afterwards taught at Corinth."

Herodotus *History* 7.26 - Marsyas, the silenus, is defeated by Apollo in a musical contest and as punishment for his *hubris* is flayed and hung on a pine tree.



Musical Competitions

Student should look at the musical competitions of the ancient Greeks. They should pay attention to the rewards given to the winners, where the competitions were held and if they were held in honor of a god or goddess. They should begin with the information below.

Historical Overview, 10.1.5 Occasions for Sacrifice and Festival- The religious aspects of the Panathenaic festival were coupled with parades, music, dancing, poetry and athletic competitions. Valuable prizes were awarded to the winners.

Harvard 1960.339 - The subject of this vase is a musical competition. Students should read the essay "**The Harrow Painter, with a note of the Geras Painter**" by Michael Padgett, specifically the passage on the Column Krater Harvard 1960.339 for more information on the competition.

Athens 215 - This sculpture depicts the musical contest of Apollo and Marsyas.

Apollodorus vol. 1.29, vol. 1.31 - Marsyas is defeated by Apollo in a musical contest and as punishment for his *hubris* is flayed and hung on a pine tree.

Herodotus History 6.129.2-129.3 - Hippocleides dances to a flute and competes with fellow suitors and dances Laconian and Attic dance. Herodotus also refers to dances by their place of origin.

Pausanias Guide to Greece 9.29.6 - Apollo killed Linos for being his rival in singing.

Pausanias Guide to Greece 10.7.2-3 - Pausanias tells of a hymn singing competition at Delphi. He mentions who won the contest and who, like Homer and Hesiod, did not compete due to the inability to accompany themselves on the lyre or loss of eyesight.

Xenophon, Hiero 9.4 - Xenophon tells of choral competitions at which prizes are offered. He discusses the training of the members of the choir.



Did the Greeks write their music down?

Though musical notations from ancient Greece surveyed in sparse bits to modern times, student may want to investigate the styles of ancient Greek music and its categories. Below is a brief sketch of citation that deal with the composition of music and its various forms.

Delphi Treasury of the Athenians (11) - On the walls of this treasury were musical notations.

Historical Overview, 10.2.4 Tragedians - Playwrights acted as musical composers as well as authors of written works.

Aristotle, *Metaphysics* 1093b - "And they point out that the interval from a to v in the alphabet is equal to that from the lowest note of a flute to the highest, whose number is equal to that of the whole system of the universe."

Herodotus *History* 1.23.1 - "Arion was a lyre-player second to none in that age; he was the first man whom we know to compose and name the dithyramb which he afterwards taught at Corinth."

Pausanias *Guide to Greece* 9.12.5 - Pronomus played the flute. Flute-players, for a period of time, had three forms of musical melodies for the flute: Dorian, Phrygian and Lydian. Pronomus devised a flute suited for every kind of melody, "and was the first to play on the same instrument music so vastly different in form."

Strabo, *The Geography* 9.3.10 - At the Pythian Games, *citharoedes*, flute players and citharists who played without singing, performed a melody called the "Pythian Nome." The Nome has five parts: angkrousis, ampeira, katakeleusmos, iambi and dactyli, and syringes. Timosthenes composed the melody that celebrates the contest between Apollo and a dragon, "setting forth the prelude as anakrousis, the first onset of the contest as ampeira, the contest itself as katakeleusmos, the triumph following the victory as iambus and dactylus, the rhythms being in two measures, one of which, the dactyl, is appropriate to hymns of praise, whereas the other, the iamb, is suited to reproaches (compare the word "iambize")." The syringes represent the death of the dragon as the syringes "imitated the dragon as breathing its last in hissings."



Regional Dances

Did dances differ from region to region in Greece? If so, how? Students should investigate the regional dances of ancient Greece. From the information below they should try to determine if the dances Sophocles speaks of in his *Ajax* are the same as the ones forged on the dancing floor at Knossos and on the shields of Achilles and Herakles.

Sophocles *Ajax* 695 - Sophocles, in his play *Ajax*, refers to the god Pan as the “dance maker” whom the chorus evokes to help them celebrate a victory. Sophocles refers to specific dance steps, the Nysian and the Cnosian steps, that the chorus calls “self taught.” An alternative spelling for the city of Knossos on Crete is Cnosus. The legendary King Minos had his palace at Cnosus and Sophocles’ Cnosian dance may have originated there.

Herodotus *History* 6.129.2-129.3 - Hippocleides dances to a flute and competes with fellow suitors and dances Laconian and Attic dance. Herodotus also refers to dances by their place of origin.

Herodotus *History* 2.146.2 - The author says that Nysa, were the Nysian dance Sophocles refers to may have originated, is in Ethiopia beyond Egypt.

Homer *Iliad* 18.494 - The bridal songs and dancing on Achilles shield are just like the ones on the shield of Herakles as Hesiod describes them.

Homer *Iliad* 18.590 - Homer’s *Iliad* says that Hephaestus forged a “dancing-floor,” like the one made by Daedalus for the daughter of King Minos, onto Achilles’ shield. Could the dance depicted on Minos’ daughter’s (Ariadne) “dancing-floor” be the same or similar to the Cnosian dance of Pan?

Homer *Odyssey* 8.250 - In this passage, the Phaeacians prepared for a dance and who took part in the action. The Phaeacians outlined a dancing space and young men, trained in the dance, struck the ground with their feet as Odysseus watched.

Hesiod *Shield of Herakles* lines 275-280 - A description of people singing and dancing to the sound of pipes.

Pausanias 8.16.3 - Pausanias also mentions Homer’s mentioning of Daedalus’ work.

Plutarch *Theseus*, 21.1-21.2 - Plutarch describes the dance of Theseus and his fellow Athenian youths who had just escaped from the Minotaur on Crete. Pay close attention to the section that reads, “Being an imitation of the circling passages in the Labyrinth, and consisting of certain rhythmic involutions and evolutions.”

Aristophanes, *Thesmophoriazusae* lines 120-121 - The Asiatic lyre accompanies the dances of the Phrygian Graces.

Plato, *Laws* 796b - Plato refers to a number of regional dances as “mimic dances,” i.e., “the sword-dance of the Curetes (Priests of the Idaean Zeus) . . . and that of the Dioscori in Lacedaemon.”

Xenophon, *Anabasis* 6.1.5-6.1.6 - The Thracians do a dance to flute music in full armor and one pretends to strike another with a saber. The struck dancer falls and fakes death until other Thracians carry him off appearing lifeless but uninjured.



Xenophon, *Anabasis* 6.1.7 - Magnesians danced the “carpaea” wearing arms to flute music. In the dance, they act out a scene of a man defending his oxen from a robber.

*Xenophon describes a series of regional dances performed by troops in Book 6, sections 1.5-1.13.

The Sound of Music

In a number of his plays, Aristophanes mimics the sound of music using onomatopoeic words for the sounds. Students should see if the words, when spoken aloud, sound like the intended noise. Below is a short list of sounds and citations of where they appear in the text. A full search of Aristophanes’ and others’ text should be done to fill out the list below.

Aristophanes, *Birds* lines 737-751, 769-783 - The chorus sings with the Muse reciting “tiotiotiotinx” and their song. The “tiotiotiotinx” is a sweet song honoring Cybele.

Aristophanes, *Frogs* line 225 - The Frogs sing “brekekekex koax koax” and because of their song they say that the Muses, Pan and Apollo love them.

Aristophanes, *Frogs* lines 1309-1321 - Aeschylus sings while playing the lyre and mimics the sound of loom strings being strummed, “wi-yi-yi-yi-yind.”

Aristophanes, *Frogs* lines 185-195 - “Tophlattothrattophlattothrat,” is the song of a water-drawer or as translated in the text, a rope-twister.



Research Topics and Paper Subjects

1. Investigate the role of the "Muse" in Plato's text. How does she possess a man? Does she effect all men in the same way? What role does the mother of the Muses, Mnemosyne, play in the creation of poetry and music?
2. What does Aristotle say about the use of certain instruments in the formal education? Why are some instruments used in early times and then shunned by later generations for educational use? Look at Aristotle's *Politics* for his views on musical education.
3. What kinds of songs, sung or instrumental, did the ancient Greeks sing? Can you find examples of songs that were popular in ancient times? Were all songs pleasing to all people? Look at the following passages for a good start: Aristophanes, *Lysistrata* lines 1296-1320, Aristotle's *Constitution of the Athenians* 20.5, Euripides, *Trojan Women* line 512, Plato, *Laws* 669e.

Music and Dance in Art and Literature*

Art

Orpheus and Eurydice, by Isamu Noguchi.

The Feast of the Gods, by Giovanni Bellini, 1514.

Music of Ancient Greece, by arranged and perf. by Christodoulos Halaris, Orata Ltd., 53 Agias Lavras, 157 73 Zografou (Athens), Greece, Fax: (1) 7249508.

Musique de la Grece Antique, perf. by Atrium Musicae de Madrid, pub. Harmonia Mundi, France.

The Music to the Electra of Sophocles, composed by Arthur E. Dyer, words by Rev. Herbert Kynaston: Novello, Ewer and Co., London and New York.

The Music to the Electra of Sophocles, composed by Charles Sanford Skilton, the Arthur P. Schmidt Co.: New York, Boston.

The Music to The Clouds of Aristophanes, composed by C. Hubert H. Parry with an English version of the Chorus by A. D. Godley, Breitkopf & Härtel: Leipzig.

The Music to The Wasps of Aristophanes, composed by R. Vaughan Williams with an English translation by H. J. Edwards, Greek Play Committee: Cambridge.

Music to the Alcestis of Euripides, by Richard Chanter, Oxford University Press: Oxford.

Literature

Metamorphoses, Ovid.

*References: Powell, Barry B. *Classical Myth*. Prentice Hall: New Jersey, 1995.

Lenardon, Robert J. *Classical Mythology*. Longman Press: New York, 1991.



Path Suggestions

A Path is a sequence of locations in Perseus stored on Path Cards by the creator. The Path card shows all locations saved as a Path in sequential order from left to right. Each Path location is represented by a Link icon in which that location is found. A Path allows the Path user to learn about a topic through a series of stops, each one building on the previous one. Paths can be of great benefit to a new *Perseus* user introducing her/him to what *Perseus* has to offer.

Path assembly is easy when you work from the Greek Animals *Knowledge Builder™*. Use the *Knowledge Builder™* for Greek Music and Dance to make a general Path. Include a Path step for each citation from the Music and Dance *Knowledge Builder™* mentioned in the directions and then add your Path Notes pointing out what is relevant to what you are reading or discussing in class. Path directions are available as a *Knowledge Builder™*, see the last page of this *Teacher's Companion™* for details.

Use the Assignments on the previous pages to build Paths associated with word analysis, art and archaeology and Primary Text evaluation. This is an excellent way to get students to think about a subject and to bring their own experiences and perceptions into their work.



Appendix A

These exercises may be given as in-class or out-of-class assignments. The exercises will take between thirty (30) minutes and an hour to complete depending on the student's computer skills. An answer key follows each practice exercise. Make sure that you give the students a thorough introduction to *Perseus* before having them attempt either exercise.

Exercise I

You will be asked to answer basic questions the answer to which you will find in *Perseus* without too much searching.

1. Name two ways to get to the Site Index.
 1. _____
 2. _____
2. Locate the three (3) main buildings at the site of Eleusis. (Hint: look at the Large site plan and the site description.)
 1. _____
 2. _____
 3. _____

3. Find one vase, one sculpture and one coin on which one of the following heroes appears: Perseus or Ajax. Fill in the information as requested below.

Vase

Museum Number (i.e. London 1983.01.176) _____
Period _____
Excavations Date _____

Sculpture

Museum Number _____
Date _____
Material _____

Coin

Museum Number _____
Denomination _____
Metal _____

4. Find the Encyclopedia entry for "Theater" and list five of the terms from the "See Also" column.
 1. _____
 2. _____
 3. _____
 4. _____
 5. _____



5. Use the English Word Search to find the word “god” in the Historical Overview (Overview). List 5 of the citations.

1. _____
2. _____
3. _____
4. _____
5. _____



Key to Exercise I

1. a) From the *Perseus* Gateway, go to the Art & Archaeology table of contents and choose a site index.
b) Select "Sites" from the pop-up menu under Links at the top of the screen.
2. 1. Kallichoron or sacred well.
2. The cave of Pluto adjacent to a triangular court.
3. The Telesterion of Demeter.
3. Look at the follow vases, coins and sculpture for the answer to each question.

Perseus

Vases - Baltimore, Hopkins AIA B5, London B471, Malibu 86.AE.146.

Coins - BCMA 1923.119.9, Dewing 1213.

Sculpture - Athens Br. 13396.

Ajax

Vases - Florence 4209, London B193, Malibu 86.AE.286, Munich 1470.

Coins - Dewing 1476, Dewing 1478.

Sculpture - Aegina E 8, Aegina W 2, Aegina W 4, Aegina W 9, Aegina West Pediment 2, Aegina W 10, Aegina W 4, Aegina W 9.

4. Five of the following terms: Cavea, Cunei, Diazomata, Episkenion, Hyposkenion, Kerkis, Logeion, Orchestra, Theatron, Parodos, Paraskenion, Prohedria, Proskenion, Skene, Theologeion, Thymele, Thyromata.

5. Five of the following citations:

5.1 The Characteristics of the City State (*Polis*), **5.12** The Oracle at Delphi and Colonization, **5.25** Public Slaves, **6.18** Tyrants and Popular Support, **6.26** Solon and Democracy, **8.2.1** The Resources of Persia, **8.2.2** Persian Religion, **8.3.1** Croesus of Lydia and the Ionian Greeks, **9.1.4** Finances of the Alliance (Delian League), **9.4.7** The Significance of the Parthenon Frieze, **10.1** The Outlines of Greek Religion in the Classical Period, **10.1.2** The Gods and Human Behavior, **10.1.5.1** Large Animal Sacrifice, **10.1.8** Belief and Ritual, **10.2** The Development of Athenian Tragedy, **10.2.2** The Performance of Tragedy, **10.3.2** Private Sculptural Commissions, **12.1.2.1** Immediate Causes of War, **15.6** The Platonic Demiurge, **15.14** Aristotle of Slaves and Women, **16.11** Alexander in Egypt, **16.16** Alexander's Last Plans, **16.18** The Death of Alexander.



Task Oriented Exercise

Exercise II

1. Look closely at the vases Harvard 1960.312 and London B193. Read the description for each vase. List the similarities between the two vases and the differences.

Differences

1. _____
2. _____
3. _____
4. _____
5. _____

Similarities

1. _____
2. _____
3. _____
4. _____

2. Using the English Word Search, find five instances of the word "friend" in the works of Sophocles' play, *Electra*.

1. _____
2. _____
3. _____
4. _____
5. _____

3. Plot the following sites on the Atlas map and answer the questions below.
Athens, Sparta, Pylos, Knossos, Thebes, Ithaka, Mycenae, Troy

1. Which site is closest to Athens?
2. Which site(s) is on an island?
3. What line of latitude is Athens on? (Hint: Look under the word "Atlas" at the top of the screen for help.)
4. Which direction would you travel if you went from Sparta to Troy?
5. Which one of the sites plotted is closest to Italy?

4. From the site catalog on Pylos, find out in which building the Linear B tablets were found.

1. _____

5. Find the Encyclopedia entry for Crocodile's Town. Go to the Primary Text citation "Hdt. 2.148" and read from section 1 to section 7. Summarize Herodotus' description of the Crocodile's town Labyrinth.



Group or Research Project

This assignment can be given as a directed exercise to demonstrate to students how they might go about researching a topic. The order of execution given below is only one way to reach a given goal. Since everyone uses *Perseus* differently it should be made clear that this is not the only way to research the appearance of animals on shields.

Order of execution

1. Browser Search - under 'Weapons' find 'Shield.' Look at images and descriptions of animals that appear on vases, sculpture and coins.

Example Vases

Baltimore, Hopkins AIA B8, Baltimore, Hopkins BMA 60.55.2, Boston 00.330, Boston 13.186, Boston 63.473, Boston 97.368, Boston 98.916, Florence 4209, Harvard 1960.312, London B161, London B193, London B209, London B210, London B329, Malibu 77.AE.11, Malibu 86.AE.114, Munich 2620, Munich 2688, Worcester 1966.63.

2. Look at the Encyclopedia entries for animals on shields. The Encyclopedia entries will point out stories about the shields, who possessed them and why a certain animal appears on a shield.

Encyclopedia

Shield, Cock, Lion, Dragon, Gorgon, Crab and more.

3. Look at the Primary Text information about the shields on which animals appear, searching for explanation of the use of animals on shields and their representation.

Primary Text

Apollod. 1.149 the invention of shields by Acrisius and Proetus.

Design your own shield

Symbols on Greek hoplite shields may be likened to a coat of arms. Students should choose their own animal or being and draw it on the shield outline provided below. Shield examples can be found in the list that appears in the previous assignment.



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