

Summary

In Unit III, students will be introduced to the Iron Age (c. 1000 BCE–CE 50). More specifically, students will examine an era within the Iron Age known as classical antiquity (also known as the ‘classical era’ or ‘classical period’). Classical antiquity refers to the period of history focused on the Mediterranean Sea and includes Greek and Roman civilizations. It begins with the writings of Greek poet Homer (8th–7th century BCE) and ends with the decline of the Roman Empire in the 5th century CE. Ragnar meets one of the most important historical figures in classical antiquity, Macedonian King Alexander the Great, who reshaped history through the defeat of the Persian Empire and unification/expansion of the Greek world. Ragnar’s admission ticket into Alexander’s world is his ability to pick up the Greek trumpet, the *salpinx*, and copy a call that he had just heard.

Objectives

Students will:

- **Locate** Greece on a map and understand the importance of sea travel for the ancient Greeks
- **Describe** the characteristics of a Greek warship, the trireme
- **Identify** the Greek trumpet, the cup-bell *salpinx*
- **Explain** why learning to play a brass instrument can be described as an odyssey
- **Consider** the role that Greek Gods play in Greek civilization

UNIT III

“GREEKS! ROMANS! BARBARIANS! LEND

PALEOLITHIC
(OLD STONE AGE)
c. 2,500,000 – 12,000 BCE

NEOLITHIC
(NEW STONE AGE)
c. 10,000 – 2500 BCE



Learning Activities

After reading or listening online to **Unit III Intro: “Greeks, Romans, Barbarians, Lend Me Your Trumpets!”** ask students to describe the boat that Ragnar was sailing on. Answers could include observations about it being a warship, the number of oars, and its speed. Share further details with students about the Greek trireme (**Key Points 2 & 3**). Then discuss the Greek trumpet, the *salpinx* (**Key Point 4**).

Ask students why Ragnar was able to copy the call he had heard right away, astonishing the onlookers. **A. Through Ragnar’s travels in the ancient world, he was becoming very good at listening and copying what he heard.** Playing music requires the ability to audiate, or imagine the sound in your mind, as well as the technical ability to produce the sound with the body.

ME YOUR TRUMPETS!"

1

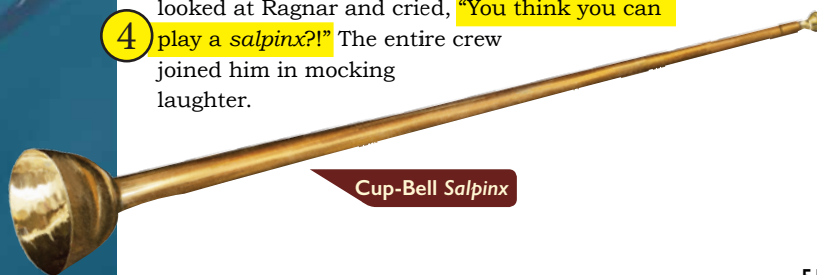
BRONZE AGE
c. 3500–500 BCE

IRON AGE
c. 1000 BCE–CE 50

IT WAS MORNING. As the waves lapped gently against the boat, Ragnar slept soundly, exhausted from the terrible storm.

All of a sudden, the dawn silence was broken by the blast of a trumpet, shocking Ragnar out of his deep sleep. It was a shrill, piercing sound, different from anything he had heard before. The boat started to lurch forward, and the shouts of men filled the air. Once again, Ragnar found himself in a place he'd never been before. It didn't take long for him to realize that his boat was tied to the side of a much larger boat. Ragnar found a ladder, which he used to climb up to the deck of the large boat. On each side sat over 100 men, rowing perfectly together. **Ragnar was on a Greek warship!** With the help of an immense sail, it quickly picked up speed.

- 3 In the distance Ragnar could see several large islands, and behind him he noticed many more ships just like the one he was on. Again he heard the shrill call of the trumpet. It seemed to be some sort of signal. Where was the sound coming from? Ragnar noticed a group of men at the very front of the boat. One of them was blowing a shiny trumpet that looked like it had a cup attached to the end. Now Ragnar was curious! When the trumpeter stopped blowing, Ragnar approached him and asked if he could play it. The man looked at Ragnar and cried, **"You think you can play a salpinx?!"** The entire crew joined him in mocking laughter.



Cup-Bell Salpinx

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Key Points

- 1 The title of this Unit Intro is a play on words, based on a famous line from Shakespeare's *Julius Caesar*: "Friends, Romans, countrymen, lend me your ears" is the first line of a speech by Mark Antony in the play *Julius Caesar*. Mark Antony was Caesar's distant cousin. He was speaking at Caesar's funeral, trying to convince the Romans to rise up against Brutus, Caesar's assassin.¹
- 2 This type of warship is called a trireme meaning "three oars" (SE pg. 8-9), referring to the three levels of oars on both sides of the ship. The trireme was a cross between a speed boat and a battering ram, making it the deadliest warship in the Mediterranean sea from the 7th through 4th centuries BCE.² It had a relatively narrow hull and was constructed of soft woods like cedar and pine, making it very lightweight and flexible. Its power and maneuverability came from a total of 170 men rowing 170 oars (85 on each side of the ship) simultaneously. Wind driven warships of the time could take 30 minutes to make a 180 degree U-turn (in perfect weather conditions), whereas the trireme could make the maneuver in under

Ask students to read **Reality Check!** (SE p. 53, TE p.) and answer the following questions:

Q. Who was Alexander the Great?

A. King of Macedonia who conquered Greece and was interested in Greek life/culture.

Share additional information on Alexander and Greek civilization in **Key Points 6 & 7** and pose the following questions:

Q. How do you think geography affected Greek civilization?

A. It is mountainous with a long seacoast and numerous islands located in the Mediterranean, so it relied heavily on sea travel.

Q. What did the Greeks pass on to other civilizations? Do you see anything in daily life that may have been passed down from Greek civilization?

A. Examples may include architecture, Greek mythology in films, democracy, philosophy, laws etc.

Ask students to read **Did you Know?** (SE p. 53) and ask them to name some of the Greek Gods. Refer back to **"It's all Greek to Me! Climbing the Ladder of the Harmonic Series"** (SE p. 8-9), and also **Unit II Wrap** (SE p. 48-49) Ask students the following questions:

Q. What does the word odyssey mean?

A. It is a word used to describe a journey that is full of challenges and adventures

Key Points, cont.

a minute. The trireme disabled or sank enemy ships by running headfirst into them with a 3 ft bronze battering ram.³

3 Ragnar was on the Aegean Sea (part of the Mediterranean), between Greece and Turkey on a trireme heading to the city of Athens. The trireme wasn't good for the rough open seas (it was prone to capsizing because of its narrow hull and light weight), so battles were fought off the coasts of the hundreds of islands in the Mediterranean.

4 *Salpinx* (plural *salpinges*) is the Greek word for trumpet. It was a very valuable and exclusive item in ancient Greece, and those who could play it were highly respected and highly paid members of their communities.⁴ Although the *salpinx* was primarily associated with warfare, on both land and sea, it had many other uses (SE p. 56, TE p.). The earliest known depiction of a *salpinx* appears on a Krator (ceremonial urn) from the 7th century BCE depicting a battle between a Greek warship and a merchant vessel.⁵ Athenian ships were often given names of animals or weapons to highlight their qualities in battle. Interestingly, they were sometimes given the name *salpinx*, demonstrating a clear association of the Greek trumpet with naval warfare.⁶

5 Ragnar is continually developing as a musician, and having played a variety of lip-blown instruments across the ancient world, he was able to pick up the *salpinx*, quickly find its notes, and recreate what he had just heard on the ship.

6 Alexander the Great was a student of Greek Philosopher Aristotle.⁷ (See **Did You Know?** SE p. 55, TE p.) Alexander is considered one of the most brilliant and innovative military tacticians in history (see also **Key Point 7**).⁸

7 Greece is a landmass consisting of a mountainous mainland with a long seacoast and numerous small islands. Early Greek (Minoan) civilization

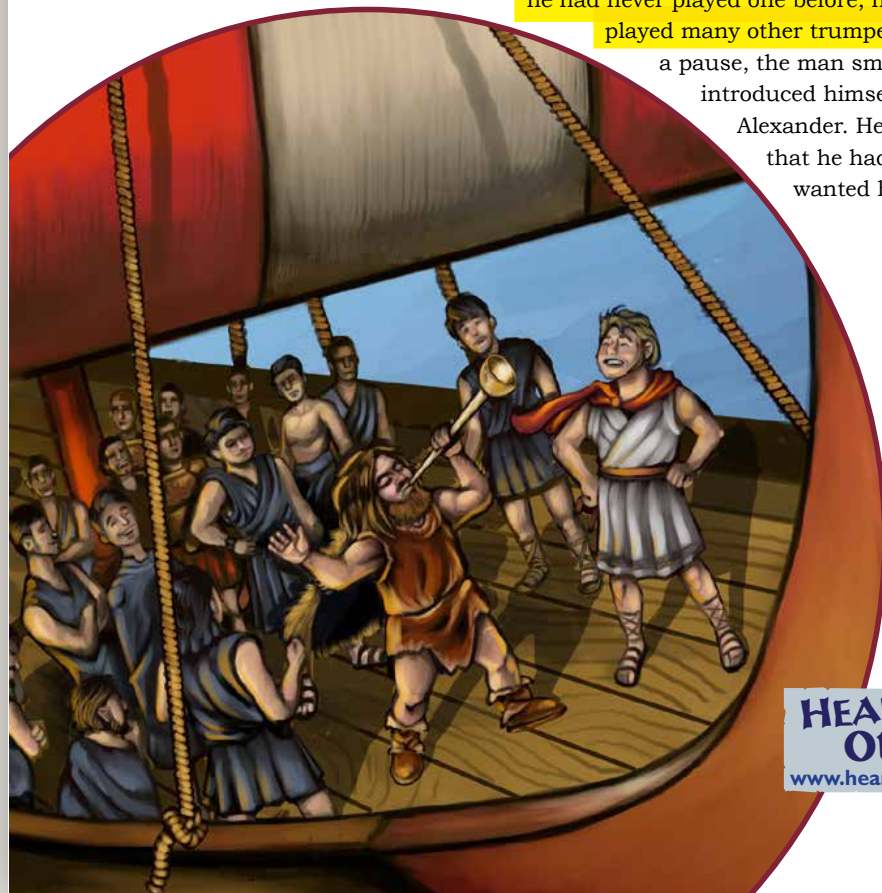
An important-looking man in a white tunic grabbed the trumpet and handed it to Ragnar. "Quiet!" he shouted to the crew. "Let him try!" Ragnar took a breath and blew:

Ta teya, Ta teya,
Tiiiiiiiiiii...
Ta teya, Ta teya,
Tiiiiiiiiiii...



Everyone was astonished. The man in the white tunic asked Ragnar where he had learned to play a *salpinx*. Ragnar explained that although he had never played one before, he had played many other trumpets. After a pause, the man smiled and introduced himself as

Alexander. He told Ragnar that he had a friend he wanted him to meet.



HEAR IT
ONLINE
www.hearragnar.com

Learning Activities, cont.

Q. Why might playing a brass instrument be an odyssey?

A. Because it can take a long time and be full of challenges, as well as fun.

Q. What role might the Greek Gods play in Ragnar's journey?

A. Triton and Poseidon seem to play a role in making the seas stormy (remind students that Triton is depicted holding or blowing a conch shell). Some students may respond that the Gods are moving Ragnar from one place/time to another.

SPECIAL PROJECT #1

Ask students to color a map of Europe, the Mediterranean and North Africa that indicates the location of Greek civilization.

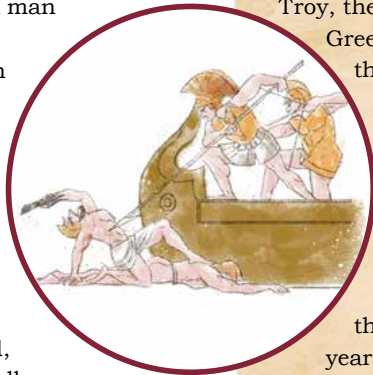


DID YOU KNOW?

REALITY CHECK! What the Experts Say About ALEXANDER

In our story, Ragnar has met a man named Alexander on a Greek warship known as a trireme. In real history, the man called **6 Alexander the Great** was the king of Macedonia.

7 He had a lifelong interest in the Greek way of life and in 338 BCE he conquered the country, which was made up of a mountainous mainland, a long sea coast and many small islands in the Mediterranean Sea. When Greek civilization reached its peak, the two large city-states called Sparta and Athens were constantly at war, either with each other or with foreign enemies. This period is called classical antiquity, and the ancient Greeks of the time are famous today for many things, especially their art, writings, buildings, fighting skills, myths, and the study of ideas which they called philosophy.



The Greek writer known as Homer wrote two famous epic poems people still read today, the *Iliad* and the *Odyssey*. The *Iliad* is a story about a very long war between the Greeks and the people of Troy, the Trojans, which the Greeks won. The *Odyssey* is the story of one of the Greek kings, Odysseus, as he returns home from the Trojan War. The journey home shouldn't have taken long, but the Greek gods decided that it should take ten years! During this time, Odysseus and his men have lots of adventures, fighting with monsters, **8 gods and the stormy seas**. They learn from their experiences and today the word "odyssey" is used to describe a long and eventful journey which has lots of excitement in it.

Learning to play a brass instrument can be quite an adventure, too, and can also be very challenging at times! But you, too, can learn a lot from your adventures with your trumpet and in time you can become an excellent player.

emerged c.2500 BCE on the island of Crete and ended suddenly in 1450 BCE. Mycenae civilization emerged on mainland Greece in around 1600 BCE, and through conquest, spread to islands in the neighboring Aegean Sea. Greek poet Homer famously described the Mycenaean's battles in his epic tales the *Iliad* and the *Odyssey*.⁹ After Mycenaean Greece fell into decline, there was a period of uncertainty, known as the 'Dark Ages.' Greek civilization emerged once more in 750 BCE with the growth of city-states such as Sparta and Athens and the establishment of colonies.¹⁰ Sparta and Athens fought constantly, but the Greeks also had foreign enemies. From this time until the invasion of Macedonian King Phillip II the Greeks were responsible for significant political, intellectual and cultural achievements, including: the establishment of democracy; the production of historical writings, dramas, comedies, and philosophical treatises: the creation of 'classical' architecture; and the propagation of religion/mythology. Philip of Macedon conquered Greece in 338 BCE followed by his son Alexander. Alexander the Great went on to conquer Egypt and much of Asia. Although his empire was short-lived, Greek influence continued in those regions for several hundred years. This is known as the Hellenistic period.¹¹

8 Numerous gods, goddesses, demigods, and mythical beings form the pantheon that make up Greek mythology. This belief system not only influenced the ancient world, but permeated Western culture throughout history, influencing literature, art, and popular culture to this day.¹²

SPECIAL PROJECT #2

Compare types of ancient Greek architecture with pictures of modern buildings, including government buildings such as the White House. Ask students to describe similarities and differences.

SPECIAL PROJECT #3

Ask students to create a poster that depicts the Greek origin story, with gods and goddesses (for example, Greek mythology as told by Hesiod in *Theogony*¹³).

Summary

Chapter 7 discusses the Greek *salpinx*, its historical significance, and the importance of music and music education in Greek civilization. Students are introduced to Herodorus of Megara, a renowned trumpeter from ancient Greece who invites Ragnar to be his student. Ragnar takes full advantage of this opportunity, learning how to practice in order to achieve a higher level of mastery. In the Practice Cave, students will learn techniques like negotiating skips past harmonic notes, playing dance rhythms, and performing various calls, including one depicted on a piece of Greek pottery.

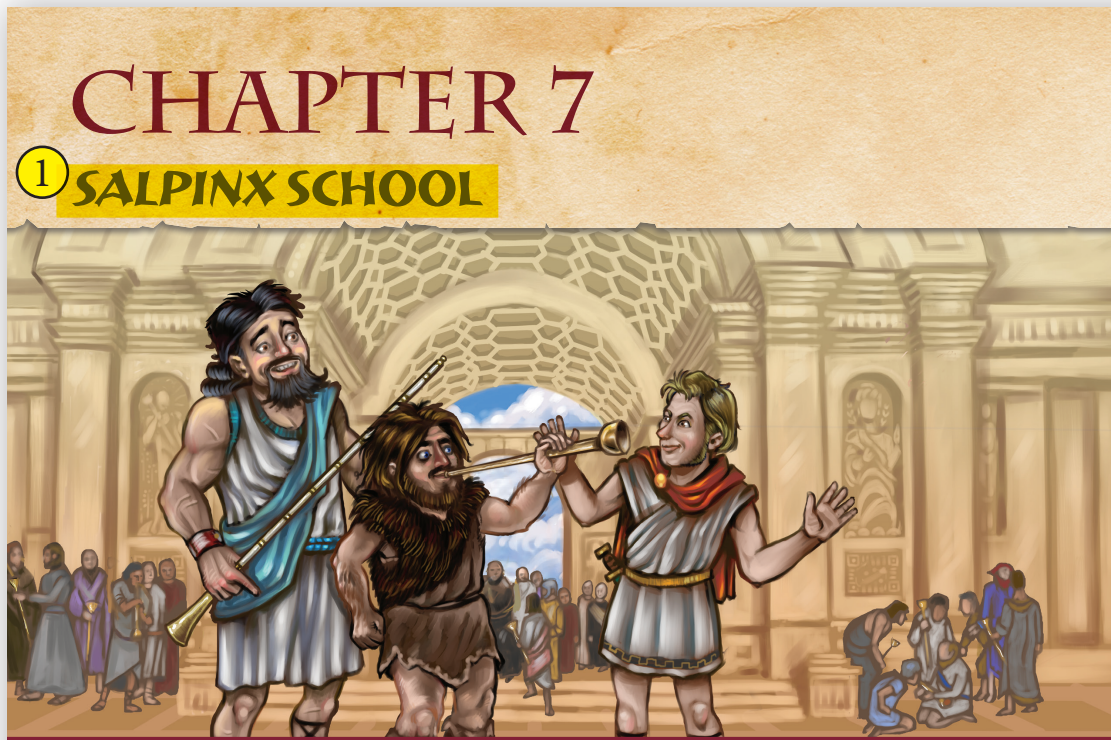
Objectives

Students will:

- **Identify** the two types of Greek *salpinges*, their characteristics and uses
- **Discover** how we know what we know about the *salpinx*
- **Discuss** the importance of music education in Greek civilization
- **Learn** why taking ones' time and practicing slowly is important
- **Practice** fundamental techniques

Learning Activities

After reading or listening online to **Chapter 7: Salpinx School**, start by sharing additional information in **Key Point** No. 1 with students, and discuss Italian Renaissance painter Raphael's famous fresco *The School of Athens*. Pull up a picture of the fresco on the internet to show the students. What does the picture show? Ask students to discuss why this painting was chosen for Chapter 7. Why is Ragnar depicted with Alexander the Great and Herodorus of Megara?



CHAPTER 7

1 SALPINX SCHOOL

THE WARRIOR SHIP sailed to one of the large islands and anchored in the harbor. Ragnar followed Alexander ashore, through the busy seaport and on towards a great city. They passed enormous buildings made of huge stone blocks and columns and a market where people were selling food, pots, and clothing. Finally, they arrived at the home of a man named

2 Herodorus, a famous *salpinx* player who was considered a hero by the people of Greece. Alexander greeted Herodorus and introduced Ragnar, explaining his remarkable musical gifts. Herodorus then handed Ragnar a *salpinx* like the one on the ship. Ragnar put it to his lips, took a breath, and blew:



Ta teya, Ta teya,
Tiiiiiiiiiii...
Ta teya, Ta teya,
Tiiiiiiiiiii...

Students will learn more about Herodorus in Chapter 8, but it is interesting to first consider Herodorus as a teacher. Ask students why they think Ragnar was so happy to have Herodorus as his teacher. Share **Key Point** No. 3, explaining the different ways that music (trumpet) has been taught throughout history.

Then, move on to the *salpinx* itself, and pose the following questions:

Q. What are the two types of Greek *salpinges*? **A.** Cup-bell *salpinx* and cone-bell *salpinx*

Q. Which type of *salpinx* is most like the natural trumpet that you are playing, the cup-bell or cone-bell *salpinx* and why?

A. Cone-bell, due to length and number of notes it can play.

Q. What do experts think that the *salpinx* was used for? **A.** Signaling, sounding alarms, entertaining, religious ceremonies, etc.

Q. How do we know what we know about the *salpinx*? **A.** Iconography, writing, depictions on pottery, even on a pair of trousers (pants).

Ask students to read **Did You Know?**

- 3 Impressed with what he heard, Herodorus offered to take Ragnar on as one of his students. Alexander and Ragnar were delighted! Herodorus explained that they were busy preparing to compete in the Olympic Games. To be accepted as a contestant, each person
- 4 had to play two types of *salpinx*, one with a cup-shaped bell and one with a longer, cone-shaped bell.

Ragnar couldn't wait to try the cone-bell *salpinx*, and without thinking grabbed the instrument. He blew into it quickly, and a loud sound blurted out, followed by a series of short spluttering noises. Oops! Herodorus glared at Ragnar and told him to be patient.

- 5 He said that to be a good learner, you have to take your time and practice slowly. Herodorus then explained that it was possible to play ten different notes on the cone-bell *salpinx*, but to truly master the instrument it was first necessary to practice low notes and learn how to play very softly.

Ragnar was confused. He had always thought it was better to play loudly and practice the higher notes. Alexander himself knew a great deal about the *salpinx*. He told Ragnar that to play low and soft, he needed to make his airstream slow and thick. Ragnar couldn't wait to start practicing this new technique.

- 6 Herodorus taught the students how to play high and low, fast and slow, as well as loud and soft. To teach the battle calls, which were usually played on the cup-bell *salpinx*, Herodorus used syllables to represent the notes. One call was "To Te Ti, To Te Ti, To Te Tiiii." Another was "To To Te To Tiiii." Ragnar couldn't believe his luck—to be a student of Herodorus! He also felt inspired hearing his fellow students, who were excellent *salpinx* players!

DID YOU KNOW?

The ancient Greeks thought it was very important to learn about music and to be able to play an instrument. Students learned music theory and music writing. Because education was so important, it is likely that the best *salpinx* players were also teachers.

The famous philosopher, Plato, thought that music was good for the soul, and wrote that, "the patterns in music and all the arts are the keys to learning." One of Plato's students, the philosopher Aristotle, wrote about how to play the *salpinx* and described how to make loud and soft sounds as well as different notes. One of Aristotle's students was Alexander the Great, so Alexander probably knew a lot about the *salpinx* as well.



Cone-Bell *Salpinx*

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p.55 and discuss some of the reasons music was important to the ancient Greeks. Ask students what else they think the ancient Greeks studied, and why. Then share **Key Point** No. 7 without giving away relevant page numbers, and ask students to point to other parts of the book when mathematics is used. Students should point to pages 8-9 in their book. If time permits, review the mathematical relationships in the harmonic series.

Next, move the discussion about Greek philosopher Aristotle, who was one of ancient Greece's most influential

thinkers. He wrote about politics, ethics, astronomy, biology, physics and other important subjects. He also wrote about how to play the *salpinx*. Discuss Aristotle with your students and pose the following questions:

Q. Why is it significant that Aristotle wrote about how to play the *salpinx*?

A. It suggests that playing the *salpinx* was a very important part of ancient Greek culture.

Q. If Aristotle described using slow and thick air to play low notes, how might he describe how to play high notes? **A.** Fast and thin

Key Points

- 1 The illustration on SE pg. 54 is a parody of Italian Renaissance painter Raphael's (1509-1511) fresco *The School of Athens* which was painted in the Pope's residence, the Apostolic Palace, in Vatican City.¹ This famous painting features philosophers, scientists, mathematicians and prophets, representing Greek philosophy, an intellectual tradition of inquiry that aims to understand fundamental questions about existence, knowledge, ethics and the nature of reality. Athens was the most powerful city-state in ancient Greece, and a center for education, the arts, philosophy, and democracy. (see also Unit III Intro) As such, it made a significant contribution to the foundations of Western civilization.²
- 2 For Herodorus of Megara see **Did You Know?** SE pg. 59, **TE** pg. ___
- 3 Historical accounts suggest that Herodorus of Megara may have had students. (see TE pg.) Throughout history, many trades or professions (including music) were passed down from elders or taught through a master-apprentice system, where the student learned as a working assistant.³ Students would often live with their teacher, paying for tuition, room and board in part by serving and by doing chores.⁴ From the Early Middle Ages, religious institutions across Europe (such as monasteries and cathedrals) became major centers for learning music. Because music was a central element of religious ceremony, many students learned composition, vocal, and instrumental music as a part of their education. Later, in the nineteenth century, music conservatories (schools for learning music) began to appear in major European cities, expanding the opportunity to learn music to a broader populace. Today, those who want to pursue music as a career

typically audition for a music degree program at a college or university.

4 Cup-bell and cone-bell *salpinges* appear in numerous ancient Greek iconographic sources. The cone-bell *salpinx* typically appears as a long version of the straight Roman tuba. Peter Holmes describes the cup bell *salpinx* as a hybrid instrument, where a tubular element is combined with a vessel or chamber, in this case a cup (in the form of a bell). Another example of this is the Etruscan *Lituus*, where an animal horn was attached to a tube. For the Etruscans and Greeks, the “bell” (as in a bell that is struck, not the bell of an instrument), was something that could ward off evil or danger, so when added to a tube, its power may have been transferred to the trumpet.⁵

5 In almost any modern musical pedagogical context, learning first to play something slowly allows for the greatest overall technical and musical mastery. Playing exercises or music slowly allows time to become aware of detail: detail of sound quality, rhythm, articulation, and phrasing. It also gives the body time to experience the muscle movement in a relaxed way, promoting overall efficiency and flexibility

6 The book *Audibilibus*, attributed to the Greek philosopher Aristotle (384–322 BCE), discusses aspects of *salpinx*

REALITY CHECK!

What the Experts Say About

THE GREEK *SALPINX*

We know a great deal about the Greek trumpet, the *salpinx*, because images of people playing it have been found on pottery, artwork, and stone carvings—and even on a pair of ancient pants! In addition, ancient Greek texts contain over two thousand mentions of the *salpinx*.



Greek Epinetron

The *salpinx* was used for many purposes. During war, it was mainly used to signal battle commands, give courage to the troops, and frighten the enemy. The *salpinx* was also used for sounding alarms, for gathering groups of people, at religious ceremonies, and for entertainment.

Finally, playing the *salpinx* was a sport! *Salpinx* players competed in the Olympic Games, and some were very famous! Having the skill to play a *salpinx* was highly praised, and the Greeks honored foreigners and women who could play.

There were two basic types of *salpinx*: the cup-bell *salpinx*, which was most often used in battle and probably played three or four notes. It was usually a

three feet in length, sometimes longer. The second type, the cone-bell *salpinx*, was probably used for non-military purposes. Because it was quite long, about five feet in length, it could play ten or more notes. The *salpinx* was usually made from bronze, with mouthpieces of ivory, bone, bronze, or even wood, but the only one which exists today is made of several sections of bone held together by bronze bands. It has a bronze bell and mouthpiece. This instrument was found with a chain that was probably attached to the bell to enable the player to hold up the end of the trumpet.

We know a lot about what the *salpinx* looked like and how it was used, but almost nothing about what was played on it. One of the only clues appears on a piece of Greek pottery called an *epinetron*. The image shows an Amazon (a female warrior in Greek mythology) playing a cup-bell *salpinx* with the lettering “To To Te To Ti” written around her. This may indicate three different notes and the use of the tongue to start the sound.

Share a summary of **Key Points** No. 9 & 12, and have students study the depiction of the Greek pottery in **Reality Check!**, which shows a female Amazon warrior playing a trumpet.

This is particularly interesting as women were often excluded from activities in Greek society, and ancient civilizations more generally. Discuss this with the students by posing the following questions:

Q. Why is it significant that a female is pictured playing a *salpinx*? **A.** It suggests that playing the *salpinx* was not restricted to gender or status in Greek society, but that it may have been based on ability.

Q. Give some examples of occasions/circumstances when trumpets were played in ancient Greece. How might this explain why there were so few women involved? **A.** Ancient

armies were generally composed of men; festivals such as the Olympics were male-dominated.

SPECIAL PROJECT #1

There are at least a thousand mentions of the *salpinx* in Greek texts (see **Key Points** No. 4 & 10). Ask students (with the help of a librarian if necessary) to find ten examples and discuss the context in which they were written or depicted, for example as part of a history, drama, work of philosophy, on a vase, etc.

SPECIAL PROJECT #2

Have students create a piece of painted pottery that depicts a Greek trumpeter. This could be done by painting on a white mug, or even with the help of the art teacher, using a kiln to create pieces of pottery.

CHAPTER 7 PRACTICE CAVE EXERCISES!

LONG NOTE EXERCISES

- Hold a lower, middle, and higher note for **14-16 seconds**
 - Practice holding different notes loudly and softly
 - Practice playing soft-loud-soft **over 4 seconds**
- **Challenge!** How softly can you play a lower note, keeping it steady?

HARMONIC NOTE EXERCISES

- ① ② ③ ④ **Challenge!** ⑤ ⑥

ARTICULATION EXERCISES

- ① a. ② a.
b. b.

MAKE MUSIC!

IMPROVISE

- A Greek battle call using syllables “ToTeTi, ToTeTi, ToTeTiiii”
 - *Salpinx* dance music for a street festival

PLAY ALONG

- ① A Greek warship signal “Ta, TeyaTa, TeyaTiiiiiiiiiii”
- ② Greek battle calls on “To, To, Te, To, Ti”
- ③ Song in praise of Zeus
- ④ **Challenge!** *Salpinx* dance for a street festival

LISTEN & PLAY ONLINE

Sound files for this page are available at www.practicecave.com

ARE YOU A MUSIC READER? Follow along with music notation for these exercises on page 84.

REMEMBER
GET READY,
GET SET,
PLAY!

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technique, including playing low notes, and using the lungs and breath to alter volume.⁶ To become skilled on any musical instrument, one must explore and develop a wide range of technical and musical variables.

⑦ In ancient Greece, music was considered a mathematical science, and was one of four branches of study (quadrivium) required for a master's degree, the other three being astronomy, arithmetic, and geometry. Early education included physical education and six years of training in music for all citizen youth, demonstrating the importance of music education in ancient Greece. Greek mathematician/philosopher Pythagoras is attributed with having discovered the mathematical relationships between musical pitches which he expressed in ratios. These ratios also describe the relationship between the notes of the harmonic series. (SE p. , **TE p.**)⁷

⑧ Probably the most interesting iconographic representation of a Greek *salpinx* was found in the desert of the Tarim Basin in Western China on a pair of pants, still being worn by its owner, who was buried 2,000 years ago in a tomb near the village of Sampula. The pieces of woolen fabric were cut from a tapestry (wall hanging), which likely

Practice Cave

Long Note Exercises

Here students will gain more control of sound production & breath control by holding notes in different registers at different volumes, and by practicing crescendi and decrescendi over 4 seconds. Have students try this first by singing to the click of a metronome at Q=60, starting very softly, peaking at the third count, and then back to soft before ending on the fifth count. Repeat on trumpets or mouthpieces.

Harmonic Note Exercises

These exercises present a few more advanced challenges. Firstly, the ability to skip past a harmonic note as seen in Nos. 1-4. Have students first sing with solfege to help identify the pitches, then

have them sing with vowels to feel how the tongue position will aid the shifting between notes. For example, for No. 1, sing “Dooo,Sooo,Miii,” and then “AAAH,OOOH,AAAY” with the same pitches. If students have difficulty making the skip, tell them to speed up the sound before changing the vowel. An analogy would be speeding up while riding a bicycle before going over a ramp to get airborne!

The second challenge is the use of different slurring and articulation patterns while moving between two harmonic notes, as in Nos. 5 and 6. It is helpful to first sing these with vowel changes before trying to play on the trumpet:

“TiYa, TiYa, Tiiii, Ti, Ta, Ti, Ta, Tiiii.”

came from Bactria in the easternmost part of the Greek Empire around the 3rd or 2nd century BCE. There is a historical account of nomads plundering and setting fire to the palace of the Greek city Ai Khanum in around 145 BCE, which could have been where the tapestry was originally hanging. The pieces of fabric depict the face of a Greek warrior and a Centaur playing a *salpinx*. This example serves as one example, among many, of the interconnectedness of ancient cultures.⁸

9 It is clear from the thousands of ancient writings referring to the *salpinx* that those who achieved a high level of mastery held an esteemed position in society. But who was allowed to play the *salpinx*? Although ancient Greece is known as the birthplace of democracy, only free-born men (with parents from Athens) that completed military service could be citizens and participate in the political process. Slaves, women, and foreign residents could not be citizens. Considering this cultural exclusivity and the segregation of class and gender in ancient Greek society, it is interesting that there are accounts of women and Africans amongst the ranks of *salpinx* players.⁹ Among them was Aglais, daughter of Magacles, who served as a trumpeter of Alexandria (Egyptian city

PRACTICE CAVE

CHAPTER 7

Salpinx School



EXERCISES!

LONG NOTE EXERCISES

- Hold a lower, middle, and higher harmonic note for **14-16 seconds**
- Practice holding different harmonic notes loudly and softly
- Practice playing soft-loud-soft over **4 seconds**
- **Challenge!** How softly can you play a lower harmonic note, keeping it steady?

HARMONIC NOTE EXERCISES

ARTICULATION EXERCISES

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Practice Cave, cont.

Articulation Exercises

No. 1 is designed to help students develop a consistent tongue stroke over repeated eighth notes. To make a clear staccato sound the tongue not only starts each note, but closes it as well, setting the stage for the next. Even though the individual notes sound detached, the feeling of airflow should continue, which keeps the sound motivated and musical. First ask students to sing on the syllable “Da:” “DatDatDatDat,Daaaa, DatDatDatDatDaaaa, ...”

Next, have them blow with air and articulation using the syllable “Tüt” (“toot”)

“TütTütTütTüt, Tüüüü, TütTütTütTüt, Tüüüü, ...”

Encourage students to feel the air flowing through the notes while doing this exercise, and then play on the trumpet or mouthpiece.

No. 2 introduces a dance rhythm which should feel in two beats per measure. First have students sing on “Da:”

“DaaaaDat Dat,DaaaaDat Dat,Dat DatDat Dat,Daaaa...”

Then try with air and articulation (“Tüüü...”) before playing on the trumpet.

Improvise

In discussing the prompts for a Greek battle call and a salpinx dance, have students read the 2nd and 5th paragraphs of **Reality Check!** (SE p. 56, **TE p.**). Ask students what they think the syllables written on the epinetron represent and give them time to play and share ideas. Then ask students to read the final paragraph on p. 55, and ask them what they think “To Te Ti, To, Te Ti, To Te, Tiiii” represents. Discuss the use of the salpinx for entertainment and ask students to improvise music for dancing. Ask volunteers to

MAKE MUSIC!

IMPROVISE

- A Greek battle call using syllables “ToTeTi, ToTeTi, ToTeTiiii”
- Salpinx dance music for a street festival

PLAY ALONG

- ① A Greek warship signal “Ta, TeyaTa, TeyaTiiiiiiiiiii”



- ② Greek battle calls on “To, To, Te, To, Ti”



- ③ Song in praise of Zeus



- ④ **Challenge!** Salpinx dance for a street festival



founded by Alexander the Great), who wore a headdress with a feather while she performed. A second example is the depiction of a female Amazon warrior playing a *salpinx* (discussed in **Key Point** No. 12 below). It appears that at least when it came to playing the *salpinx*, ability was more important than status or gender.

- ⑩ The only existing Greek *salpinx* is currently held in the Boston Museum of Fine Arts. It was found in a cave near Olympia (where the ancient Greek Olympics were held) and may have been left as a votive offering. (See www.bfbresources.com/trumpet-treasure-hunt/the-boston-salpinx-project/ to learn more)
- ⑪ An epinetron is an ancient piece of pottery made to sit on the knee as a workspace for weaving. It was often highly decorated and given to women as a wedding gift. The epinetron depicted on SE pg. 56 provides clues about what sounds the *salpinx* may have produced.¹⁰
- ⑫ According to Greek mythology, the Amazons were a tribe of fierce and skilled warrior women who lived in a matriarchal society. They were often depicted as expert archers and horsewomen, capable of holding their own in battle against men.¹¹

share their ideas and keep track of examples that demonstrate compelling expressive intent (TE p. 49) for possible use in future performance.

Play Along

Most of the musical pieces here involve various articulations and the ability to skip over harmonic notes. Have students sing these with solfège or consonant & vowel combinations before attempting to play, either in response to the classroom teacher or along with online sound files.

For No. 4, have students sing first with syllables: “Teeyat, Tat, Teeeyat, TaTi, TiTi, TaTiiii” Show students a simple two-step dance to perform while they sing this, and see if they can do the dance while playing.

Play “To, To, Te, To, Ti”

Before playing No. 2 under **Play Along**, have students read the Final Paragraph of **Reality Check!** (SE p. 56). Ask them what they think the syllables “To, To, Te, To, Ti” could represent in terms of notes on the trumpet. Suggest that the different vowels could mean different notes, and ask which one represents a low note, which one a high note, and which one a middle note. After coming to a consensus, ask students to improvise using those syllables and have them share with the class.

Summary

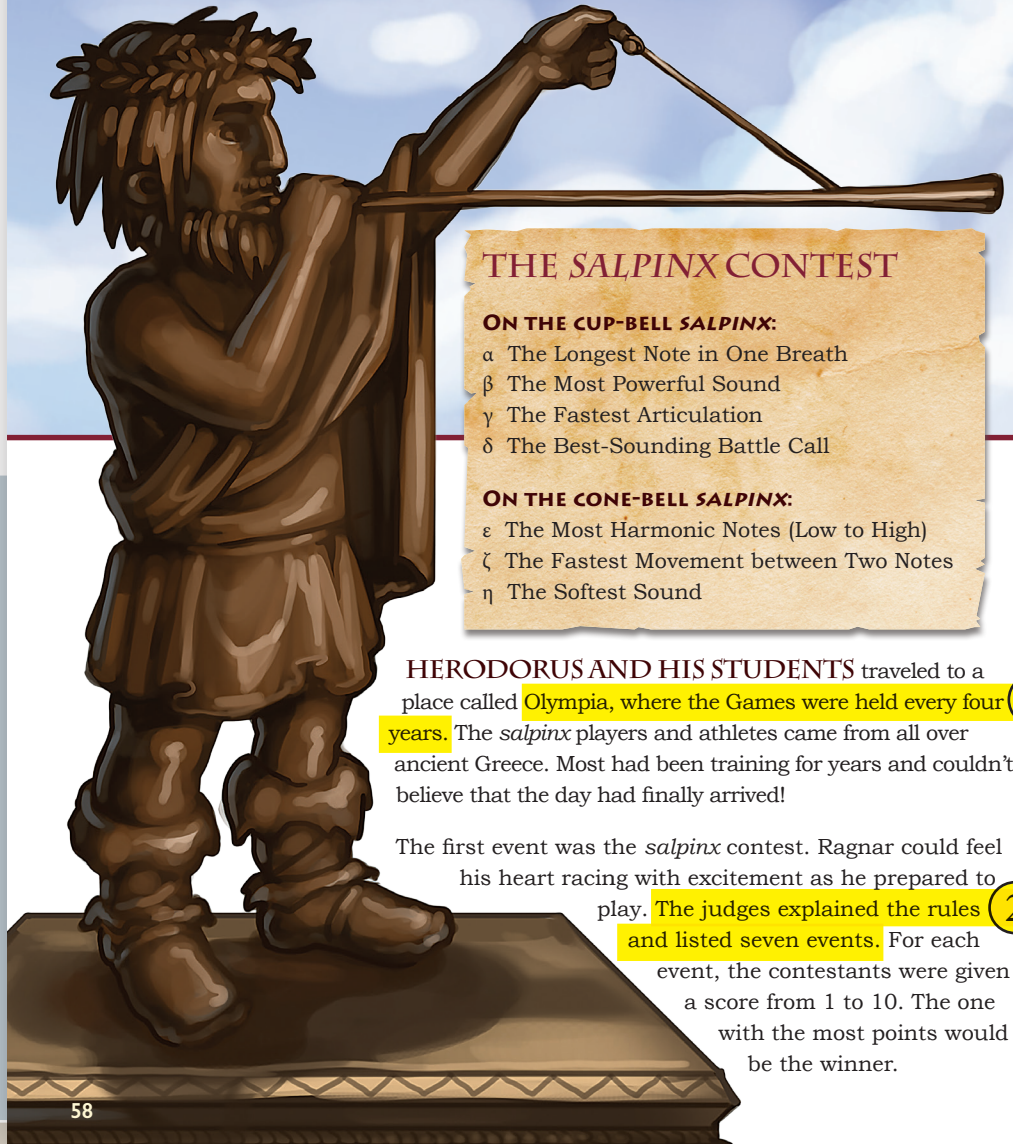
Chapter 8 explores the idea of competing through Ragnar’s experience at the Olympics. Students learn more about Herodorus of Megara, who acts as both Ragnar’s supporter and rival in the story, and discover that the *salpinx* played a role both as a competitive event and for signaling during the ancient Olympic games. Toward the end of the chapter, students learn about Ragnar’s next adventure, in Rome. Ragnar reflects on his travels to date, and the importance of his teachers on his journey. As part of the chapter’s playing activities, students help create and take part in their own *salpinx* contest.

Objectives

Students will:

- **Explore** the ancient origins of the modern Olympic games and the competitive use of the *salpinx*
- **Reflect** on the story of the contest, and what it says about the character of Herodorus and Ragnar
- **Learn** about the two types of *salpinges* and what they may have been used for
- **Practice** exercises and musical pieces that reflect what is known about the *salpinx* in ancient Greece

CHAPTER 8 TRUMPET OLYMPICS



THE SALPINX CONTEST

ON THE CUP-BELL SALPINX:

- α The Longest Note in One Breath
- β The Most Powerful Sound
- γ The Fastest Articulation
- δ The Best-Sounding Battle Call

ON THE CONE-BELL SALPINX:

- ε The Most Harmonic Notes (Low to High)
- ζ The Fastest Movement between Two Notes
- η The Softest Sound

HERODORUS AND HIS STUDENTS traveled to a place called Olympia, where the Games were held every four years. The *salpinx* players and athletes came from all over ancient Greece. Most had been training for years and couldn't believe that the day had finally arrived!

The first event was the *salpinx* contest. Ragnar could feel his heart racing with excitement as he prepared to play. The judges explained the rules and listed seven events. For each event, the contestants were given a score from 1 to 10. The one with the most points would be the winner.

Learning Activities

After reading or listening online to **Chapter 8: Trumpet Olympics**, discuss what happened when Ragnar and Herodorus tied in the competition. (**Key Point** No. 3) Pose the following questions:

Q. Why did Ragnar want to withdraw his name from the competition? **A.** Because he felt uncomfortable competing against his teacher who he admired so much.

Q. Why did Herodorus urge Ragnar to stay in the competition? **A.** Because he was impressed by Ragnar’s performance

and wanted to see Ragnar do his best.

Q. What words would you use to describe the behavior of both Ragnar and Herodorus in this situation? **A.** Respectful, generous, supportive, appreciative, grateful, selfless, noble, giving, unselfish

Read **Key Points** No. 5 & 7, and have students read **Reality Check!** SE p. 61. Give students a summary of how the original Olympic games started and evolved, and some possible reason as to how/why the *salpinx* was added as an event before posing the following questions:

Q. Why was the *salpinx* contest the opening event of the Olympics? **A.** Because they needed a *salpinx* player to get everybody’s attention for the announcements.

Q. How do the organizers of major sporting events like the Olympics today keep events on track, make important announcements, etc.? **A.** By intercom systems, amplifications with speakers spread throughout the stadium, also on television or streaming services.

Q. How important is this for modern sporting events? **A.** Extremely important!

The first four *salpinx* events were to be played on a cup-bell *salpinx*. For the first event, “The Longest Note in One Breath,” Ragnar took in a huge breath and blew for as long as he could. To his surprise, he received only one point less than Herodorus. Next was “The Most Powerful Sound,” and when Herodorus played, it was so deafening that the spectators held their hands over their ears. Ragnar continued to score just behind or equal to Herodorus until the judges asked the contestants to switch to the cone-bell *salpinx*. For “The Most Harmonic Notes,” Ragnar scored a perfect 10, one point higher than Herodorus! The competition continued. Finally, they reached the last event, “The Softest Sound.” Because Ragnar had worked so hard on the technique his friend Alexander had explained to him, he scored another perfect 10! When the points were added up, Ragnar and Herodorus were tied for first place!

The judges decided to repeat the first event in order to break the tie, but Ragnar felt very uncomfortable competing against his wonderful teacher, whom he admired so much. He asked the judges to withdraw his name and let Herodorus have the honor of winning. But Herodorus was very impressed by Ragnar and urged him to compete in the tie-break. Ragnar reluctantly agreed.

3

but Ragnar felt very uncomfortable competing against his wonderful teacher, whom he admired so much. He asked the judges to withdraw his name and let Herodorus have the honor of winning. But Herodorus was very impressed by Ragnar and urged him to compete in the tie-break. Ragnar reluctantly agreed.



DID YOU KNOW?

In our story, a man named Herodorus becomes Ragnar’s teacher. Herodorus of Megara was certainly one of the most famous *salpinx* players in Greek history. He was famous because he helped Demetrius, a king of Macedonia, conquer the town of Argos in Greece. According to the stories of returning soldiers, it was Herodorus’s awesome sound that gave them the strength to lift the battering ram and break down the city wall. Afterwards they learned that he had been playing two instruments at the same time!

Herodorus was also famous because he won ten Olympic contests and because he had a reputation for being given enormous amounts of food and drink. He was a huge man but experts think that this would have been too much for him to eat on his own, so they think he probably used it to feed his students.

4

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Key Points

- 1 Olympia is a small town in the region of Elis, on the Western part of the Peloponnese peninsula. In ancient Greece, it was a major religious sanctuary where games were held in honor of Zeus, the king of the Gods in Greek mythology who ruled on Mount Olympus (incidentally not located near the town of Olympia).¹
- 2 It is not known for certain what the *salpinx* contest consisted of— what contestants might have played and how they were judged— but it’s clear that the power, or loudness, of the sound was of primary importance since the winner’s job was to signal important moments in the proceedings. On the other hand, we know that the *salpinx* was also used for entertainment, revealing a musical role. In this case, the longer cup-bell *salpinx* may have been used since it could play more notes.² One account of the use of the *salpinx* at the Olympic games likens trumpets leading the procession of judges to pastoral melodies that herd sheep, perhaps suggesting that not everything played at the Olympic Games was of a raucous nature.³
- 3 This aspect of the story illustrates Ragnar’s deep respect for his teacher, alongside Herodorus’ integrity and selflessness as an educator who prioritizes his student’s success.
- 4 Herodorus’ name first appears as a winner of the Olympics in 328 BCE, thirty-two years after the first Olympic record of a *salpinx* contest. Ancient Greek scholar Julius Pollux (*fl.* 2nd Century CE) reported that Herodorus won the Olympic *salpinx* contest 17 times, while another account, by Greek rhetorician Athanaeus (*fl.* 200 CE), recorded 10 wins. Considering the fact that 17 Olympic contests would span sixty-four years, Athanaeus’s account might seem more believable.⁴ Herodorus

Use this to explain why the *salpinx* contest would have been so important in the ancient Olympics, and why winners were treated like the winners of other olympic athletic contests, including having statues erected in their honor.

Q. What do you think “Ragnaricles of Paleolethia,” (the honorable name given to Ragnar after he won, and that which appears on the illustration on SEp. 60) means?

A. It is the Greek version of “Ragnar from the Paleolithic Period (Stone Age)”

Read **Key Point** No. 4, and ask students

to read **Did You Know!** SE p. 59. Point out that there are historical accounts that differ about Herodorus’ accomplishments, and that some of what was written about him could be exaggerated to make him seem bigger than life; for example, the account of him playing two *salpinges* at the same time to inspire soldiers in the battle of Argos, or the account of him winning 17 Olympic contests over the course of sixty-four years.

Q. Can you think of people in the modern world that are made to look bigger than life, whose accomplishments

Key Points, cont.

is also believed to have won the periodonikes (i.e., he won all four Panhellenic games - see **Key Point No. 7**) up to 10 times.⁵ Athenaeus provides more interesting details about Herodorus, including that he was over seven feet tall, had strong lungs, and was given an enormous daily ration of food and drink: five pounds of bread, twenty pounds of meat, and six quarts of wine. Historian John Hale suggests that the large quantities of food and drink were likely supplied not just for Herodorus, but probably for his household assistants and students.⁷ Herodorus is also reported to have slept on a bear skin, possibly in imitation of Hercules who wore a lion skin, having strangled the beast with his bare hands.⁶ As Herodorus is attributed with winning an incredible number of *salpinx* contests, and having achieved an extraordinary military success (**Did You Know SE** p.59) in which he played two *salpinges* simultaneously, it is possible that historical accounts describing him were somewhat sensationalized. What is clear however, is that Herodorus was indeed a legendary *salpinx* player.

- 5 Hellenisation (made into Greek) of “Ragnar of the Paleolithic.” Winners of the *salpinx* contest did not receive prizes

Ragnar took a long deep breath and held the sound while the judges counted to 55! Herodorus stepped up, and tried to take an equally long and deep breath but could not match Ragnar. Ragnar had won! Cheers erupted. Ragnar and Herodorus smiled at each other, delighted, and everyone circled round to congratulate the new champion. The judges placed an olive wreath on his head and gave him the honorable name “Ragnaricles of Paleolithia.”

As the Olympic contests drew to a close, two men who had been watching the competition approached Ragnar. They told him about the amazing trumpets used in a place called Rome, and invited Ragnar to travel with them. Of course, he couldn’t resist their offer.



Learning Activities, cont.

are sometimes exaggerated? **A.** Politicians, sports stars, pop stars, celebrities, etc..

Draw attention to the final part of this chapter’s story, from SE p. 60, paragraph 2, to the end, and ask students why they think the men from Rome were asking Ragnar to go with them.

A. Because they saw him compete and probably had a job in mind for him.

Compare this story to how athletes are drafted into professional sports teams, and remind students that the ability to play a *salpinx* was a highly respected skill.

SPECIAL PROJECT #1

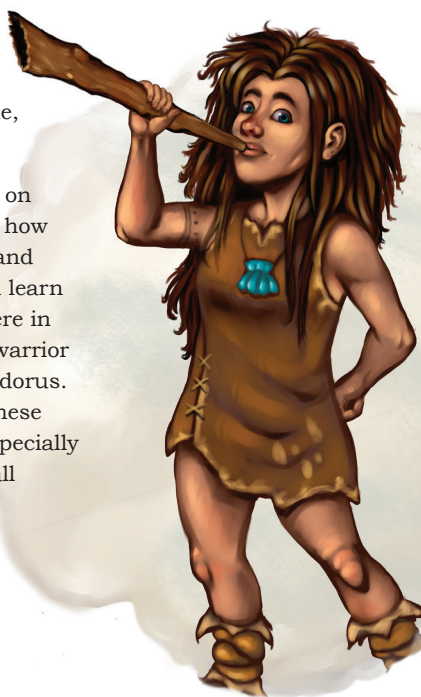
Geography: Produce a map of the Mediterranean world and ask students to find Athens in Greece where Ragnar attended *salpinx* school in Chapter 7. Point out where the Greek warship, the trireme, that Ragnar found himself on may have fought its battles. Then trace Ragnar’s journey to Olympia, where he went to participate in the Olympic games. Next ask students to locate the country of Italy and the city of Rome, and then have them trace the pathway of Ragnar’s next journey.

SPECIAL PROJECT #1

Introduce students to Zeus by displaying images and explaining that he is the king of the Greek gods who lived on Mount Olympus. He presided over the council of gods, controlled the

Alexander and Herodorus made sure that Ragnar was given a memorable send-off, including a large feast and, of course, a *salpinx* performance! When it was time to go, Ragnar thanked Alexander, Herodorus, and his fellow students for their remarkable kindness and friendship. As he boarded the ship bound for Rome, he waved a tearful goodbye.

Ragnar thought about all the people he had met so far on his remarkable journey: the Hebrews, who taught him how to play the *shofar*; the Egyptians, who played the *snb* and taught him about writing; the traders, who helped him learn about trumpets in many faraway places. Best of all, here in Greece, he had become particularly close to the great warrior Alexander and to the magnificent *salpinx* teacher Herodorus. They had all taught him so much! Would he ever see these people again? And what about his friends at home—especially Annika? Would he ever be able to go back to where it all started?



REALITY CHECK!

What the Experts Say About TRUMPETS AT THE OLYMPICS

- 7 The Greek Olympic Games began in 776 BCE (almost 2,800 years ago!) and inspired the modern Olympic Games. The Olympics was staged every 4 years at Olympia, a valley near the Greek city of Elis in honor of the Greek god Zeus. People from all over Greece came to watch and take part, and trumpet playing was the opening event. Not much is known about how the *salpinx* players were judged, but because the *salpinx* was often used by the military, the loudness or power of the sound was probably important. The winner wore an olive wreath and had the honor of announcing contestants, signaling the start of events, and awarding winners throughout the Games.

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weather, and is often depicted with a powerful thunderbolt. Introduce some of Zeus' children such as Apollo, the god of the sun, music, poetry, and healing; Dionysus, the god of wine, pleasure, and festivity; Aphrodite, the goddess of love and beauty; and Ares, the god of war. Ask students to think about why the ancient Olympic games were held in honor of Zeus while showing images of Olympia and Mount Olympus. Be sure to show them on a map to clarify that they are in different locations—about 350 miles apart, a seven-hour journey by car. Have students create a drawing or short story about what they think life was like on Mount Olympus with Zeus and the other gods.

or monetary rewards as athletic winners sometimes did, but all victors at the Olympic Games were given a crown of olive leaves, a symbol of extraordinary achievement to this day. The real reward for winners of the Olympics was the notoriety and honor that was gained with the public.⁸ Statues were often erected in their honor, as parodied in this chapter. Only free-born Greek men were able to compete in the Panhellenic games (games held across the Greek world), so Herodorus would have had to pull some strings for Ragnar to compete.

- 6 This part of Ragnar's story highlights how people in various fields are able to advance their careers by being seen in competitive situations. Ragnar didn't know it, but his new Roman friends were talent scouts, looking for highly skilled trumpeters to serve in a Roman legion. Although the Greek Empire came to an end at the hand of the Romans in 146 BCE, Greek cultural identity continued during the ensuing period, now referred to as Roman Greece. Greek culture maintained an enormous influence on the Roman world. For example, in 86 CE, Roman emperor Domitian instituted the Capitoline games, a Roman version of the Greek Games which featured athletic contests of Greek origin, as well as a *tuba* (Roman version of the *salpinx*) contest.⁹

- 7 The Olympic games were held every four years from 776 BCE to 393 AD (almost 250 years after Greece was absorbed into the Roman empire). A 200 meter foot race was the only event recorded in the first year of the Olympic games. Records of subsequent games show that events were added over time, such as longer foot races, javelin and discus throwing, long jump, wrestling, boxing, and chariot races. It is likely that as events were added, and as numbers of contestants, officials, and spectators grew, *salpinx*

Key Points, cont.

players and heralds (people with a strong voice to relay instructions over great distances) were increasingly needed for control—to keep events running on track through signaling and announcements.¹⁰ Considering that competitions were a common feature of public gatherings throughout ancient Greece, the question of who should be invited (or hired) to serve the role of trumpeter likely resulted in the addition of the *salpinx* contest, which was eventually established as the first event of the games, along with a contest for heralding. The first winner of the *salpinx* contest, Timaios of Elis, was recorded at the 96th Olympiad in 396 BCE, indicating that it took over 400 years until the *salpinx* contest was formally added as an event. In Greece there were other regularly held games that included a *salpinx* contest, including the Nemean (in honor of Zeus and Athena), Pythian (in honor of Apollo), and Isthmian (in honor of Poseidon) games. These along with the Olympic games comprised the Panhellenic Games.¹¹ Perhaps the earliest formal music performance competitions in history were held at the Isthmian games, where singing and flute playing were featured events.

CHAPTER 8 PRACTICE CAVE EXERCISES!

LONG NOTE EXERCISES

- How long can you hold a note when you play softly?
- How long can you hold the same note when you play loudly?
- **Challenge!** Practice playing soft-loud-soft over 8 seconds

HARMONIC NOTE EXERCISES

① ② ③ ④ **Challenge!** ⑤ ⑥

ARTICULATION EXERCISES

① ^{a.}_{b.} ② ^{a.}_{b.} ③ ^{a.}_{b.} ④ ^{a.}_{b.}

MAKE MUSIC!

IMPROVISE

- A signal to start the chariot races!
- A fanfare to honor the winning contestants

PLAY ALONG

① Olympic march
② Olympic fanfare
③ Song of Olympia
④ **Challenge!** Victory dance!

REMEMBER
GET READY,
GET SET,
PLAY!

LISTEN & PLAY ONLINE
Sound files for this page are available at www.practicecave.com

ARE YOU A MUSIC READER? Follow along with music notation for these exercises on page 86.

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Practice Cave

Long Note Exercise

These exercises will help students gain perspective on how the loudness of the sound relates to the amount of air required to produce it. Have students jot down how long they are able to hold the note while you count out loud with an amplified metronome set to 60. Try softly a few times for students to get their best result before trying loudly. If students can only hold the sound for a few seconds loudly, ask them to see if they can play loudly without pushing the air, but rather by allowing the maximum amount of air to escape without pushing forcefully. When brass players use too much force in expelling the air, it compresses in the lungs, making the player feel as if they are running out of air very quickly.

Learning how to play from soft to loud to soft over 8 seconds requires a great deal of breath control. Set the metronome to 60 and ask students to first sing, counting numbers. Make sure the volume at count 1 is very soft before increasing volume. Have students peak the volume at count 5, then decrease volume to count 9. Do this a few times before playing on trumpets.

Harmonic Note Exercises

These exercises will increase facility and speed in moving between notes of the harmonic series and extend the range of harmonic notes to B \flat in the staff. Practice Nos. 1 & 2 first by singing with solfège syllables to put the exercises into a tonal context.

No. 1: “Sooool-Doooo-Miii-Dooo, Sol-Do-Mi-Do, Soool”

Then sing with vowels for tongue position movement:

No. 1: “OH-AAH-EEE-AAH, OH-AH-EE-AH-OOOH”

PRACTICE CAVE

CHAPTER 8

Trumpet Olympics

EXERCISES!

LONG NOTE EXERCISES

- How long can you hold a harmonic note when you play softly?
- How long can you hold a harmonic note when you play loudly?
- **Challenge!** Practice playing soft-loud-soft **over 8 seconds**



HARMONIC NOTE EXERCISES

1

3

5 **Challenge!**

ARTICULATION EXERCISES

1

3

4

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Before playing Nos. 3 & 4, Sing with vowels and articulation to establish tongue position:

“TA-EE,AA-EE,TA-TE-TA-TE,TAAA”

Sing Nos. 5 & 6 with solfege before trying to play on trumpets:

“Sol-Do-Mi-Sol-Siiiiiii” “Sol-Si-Sol-Mi-Doou”

Articulation Exercises

These exercises are designed to prepare students for the Make Music! pieces on SE p. 87. Nos. 1 & 2 juxtapose dotted eighth-sixteenth rhythms with eighth notes, while No. 3 features a triplet fanfare figure. No. 4 introduces groups of four notes per beat (sixteenth notes) to help students increase speed and control while playing repeated notes. As always, try to first sing the rhythms, or blow with air and articulation as follows, before attempting to play on the trumpet: No. 1 singing:

“TaanTaan-Ta,DatDatDatDat,TaanTaan-Ta,Daan”

No. 1 with air and articulation: “TüüüTüüü-Tü,DütDütDütDüt,TüüüTüüü-Tü,Düüü..”

Improvise

Discuss the prompts as they relate to what students have learned about the use of the *salpinx* in the ancient Greek Olympics and give them time to try out some ideas. Ask volunteers to share their improvisations with the class and keep track of examples that demonstrate compelling expressive intent (TE p. 49) for possible use in future performance.

Play Along

These **Make Music!** pieces reflect the fact that the *salpinx* had many uses in ancient Greece, including in musical contexts.

Trumpet Olympics!

This chapter offers a chance for a friendly classroom competition. To encourage good sportsmanship, review **Learning Activities** on TE p. 80 (**Key Point** No.3). Encourage students to support each other and do their best.

After reading/listening to the story, ask students to consider aspects of playing suitable for a competition (see SE p. 58). Brainstorm ideas on a whiteboard and collaborate with students to establish competition parameters: number of events, participants per event, judges, and whether roles will rotate. Make the scoring simple, like in the story, with scores of 1-10 per event, the highest total score determining the winner.

After assigning students their events, provide time for practice. Use this opportunity to explain that whether learning a school subject like math or English, a musical instrument, or an athletic activity, challenges vary for everyone. To excel, it's crucial to dedicate effort to overcoming difficult tasks, alongside enjoying easier ones.

Competition Guidelines:

- I. Create a rubric listing events and contestants, and photocopy it for judges.
- II. Allow struggling students multiple tries before scoring.

Trumpet Olympics!, cont.

III. Total scores after all events are complete and reward all participants, special prizes for top scorers.

It may be possible to have standout students showcase skills at the school's field day, signaling the start of events and special announcements. Get a meeting with your school's physical education (PE) teacher!

The Boston Salpinx

The **Make Music!** pieces on SE pg. 87 are all based on improvisations made by professional trumpeter Terry Everson on the Boston salpinx. Based on what is known about the various ways in which the *salpinx* was used, Mr. Everson was asked to improvise a song, a march, a fanfare, and a dance.

Audio recordings can be heard on the [bfbresources.com](https://www.bfbresources.com) website at the following url: <https://www.bfbresources.com/hear-ragnars-amazing-sounds/unit-iii/>

A video of Mr. Everson playing the Boston *salpinx* can be seen here: <https://www.bfbresources.com/trumpet-treasure-hunt/the-boston-salpinx-project>



MAKE MUSIC!

IMPROVISE

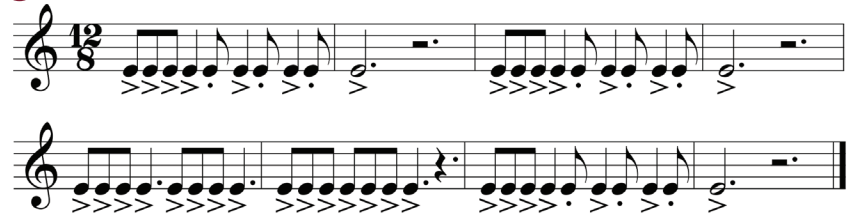
- A signal to start the chariot races!
- A fanfare to honor the winning contestants

PLAY ALONG

1 Olympic march



2 Olympic fanfare



3 Song of Olympia



4 Challenge! Victory dance!



Practice Cave, cont.

For Nos. 1 & 3, a realistic first goal is to sing in solfège with the online resource recordings. It is helpful to first sing the pieces a few measures at a time (without the recording) before trying to sing through them in their entirety. After students feel comfortable singing, then build the pieces the same way with the trumpets, working in smaller sections until students can play them in their entirety with the online recordings.

For No. 2, practicing with air and articulation alone several times, in two measure sections, will be good preparation:

“TüTüTü, Tüü-Tüt, Tüü-Tüt, Tüü-Tü, Tüüü..” etc...

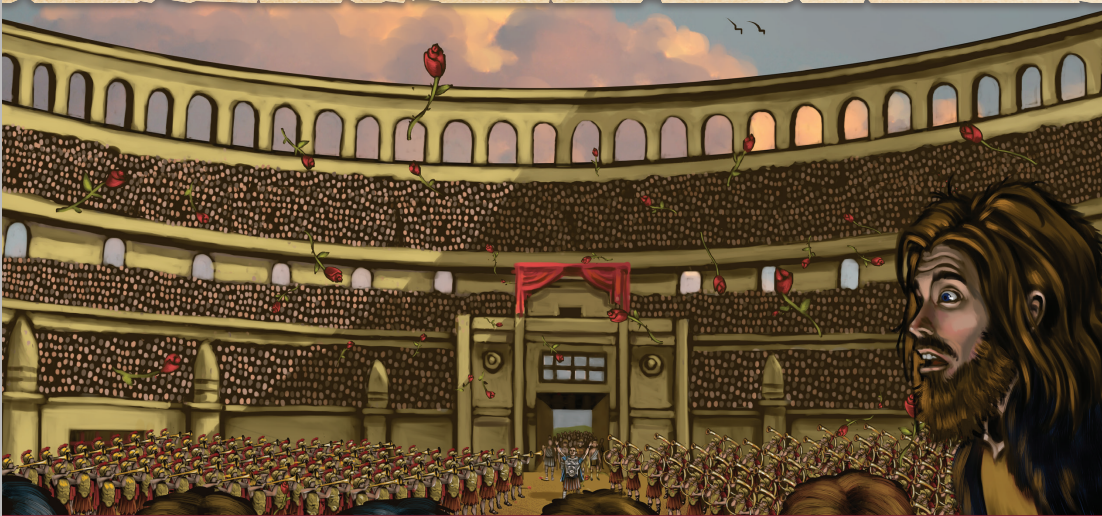
Playing No. 4 together in a classroom will be very difficult, but practicing it can be a lot of fun. Start by explaining the mixed meter: two quick beats followed by a longer one, akin to a ball bouncing twice low and once high. Use numbers and movement to feel the rhythm:

“One-and, Two-and, Three-and-a, One-and, Two-and, Three-and-a”

Count along with the online recording, then practice singing using solfège before attempting to play on trumpets. Offer a special reward to students who master this at home.

CHAPTER 9

1 WHEN IN ROME...

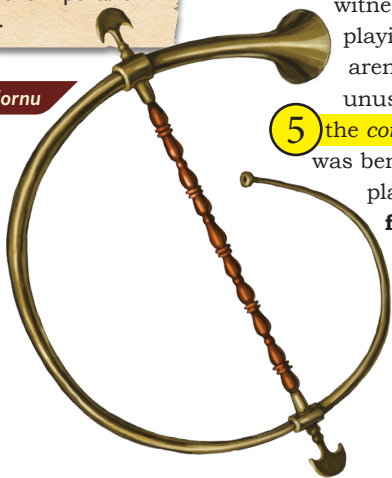


KEY WORDS

Fanfare

A piece of music played loudly by trumpets. It is usually played to announce that someone important is arriving.

Roman Cornu



RAGNAR WASN'T READY for what he was about to see in Rome. The men who had invited him led the way through the city to the Colosseum, a massive stadium that could hold tens of thousands of spectators. The sound of trumpets, as overwhelming as the Colosseum itself, drew in excited crowds of people. Once inside, Ragnar witnessed an astounding sight: 200 trumpeters playing while the contestants paraded into the arena. Half of the musicians were holding an unusual-looking trumpet, which the men called the cornu. Instead of being long and straight, it was bent into a circle that wrapped around each player's body. Suddenly a brilliant cornu fanfare brought the contestants' parade to a halt. Everyone's eyes were on the leader of the parade, the Roman emperor! The crowd cheered and shouted at the top of their voices as he waved and smiled.

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Summary

In Chapter 9, students are introduced to ancient Rome where Ragnar witnesses an extravagant public display at the Colosseum featuring 200 trumpeters and tens of thousands of spectators. The Romans made use of lip-blown instruments on a scale never before seen. Ragnar then learns that he has been recruited to play in a Roman legion and is taken to boot camp where he is tested on his skills at playing both the tuba and cornu. There he learns the discipline of playing as a member of a team before being shipped off to Britannia to fight the Celts.

Objectives

Students will:

- Explore the origins, forms, capabilities, and uses of Roman trumpets
- Learn about the Roman Empire and its geographical and cultural reach
- Understand the importance of the games for the Romans
- Consider how large numbers of players perform together with a high degree of precision
- Practice fanfares that could have been played on Roman trumpets

Learning Activities

After reading or listening online to Chapter 9: When in Rome, and reviewing Key Point No. 1, ask students if they have ever heard someone use the expression, "When in Rome." Explain that it is a shortened version of the saying, "When in Rome, do as the Romans do," and ask students what they think it means and how it relates to Ragnar's journey.

Summarize the history of the expression and its connection to the religion of Christianity. Point out that when it was written in the 4th century CE, Christianity was growing and spreading in popularity, but that earlier in that century, Christians were persecuted (in places like the Colosseum) because they were seen as a threat to the Roman way of life. By the end of the 4th century

however, Christianity was adopted as the official religion of the Roman Empire, which is why the spiritual center of the Catholic church is located in the city of Rome to this day. Point out that the saying works well for Ragnar who is always respectful of the people and places he encounters on his travels.

Review Key Point No. 3 and summarize some of the main points, including the fact that the Colosseum in Rome could hold well over 50,000 spectators. Pose the following questions:

- Q. Can you think of places like this in your town or city where lots of people get together to watch sports or other forms of entertainment? A. stadiums, theaters, arenas, gymnasiums, ball parks, racetracks, auditoriums
- Q. Have you ever seen or heard anything like Ragnar saw at the

Key Points

1 This saying is a shorter version of the well-known phrase, "When in Rome, do as the Romans do," which in modern times means that it's polite and helpful to follow the customs of the place you're visiting. It originated from Saint Ambrose, a bishop in Milan, in the late 4th century CE. According to the story, Saint Ambrose was consulted by his friend Saint Augustine (of Hippo), a bishop in North Africa, about whether they should fast on Saturday like the Romans did in Milan. Augustine recorded Ambrose's advice in Latin, and the phrase appeared in English around 1530. Before the 4th century CE, practicing Christianity was seen as a threat to traditional religious and social norms and was therefore illegal in the Roman Empire. Christians faced sometimes brutal persecution, including being condemned to die in the Roman games. However, in CE 313, Emperor Constantine the Great issued the Edict of Milan, which legalized Christianity and granted religious tolerance. Christianity became the official state religion with Emperor Theodosius I's Edict of Thessalonica in CE 380. This established Christianity as the empire's primary religion, leading to the decline of pagan practices.¹

2 The city of Rome has a history that

Learning Activities, cont.

Colosseum, with 200 trumpet players playing at the same time? What did you see and where did you see it? **A.** Marching band or drum & bugle corps in a stadium, a concert in a theater or arena.

Point out that the Romans held games across their conquered lands to both entertain the spectators and send a message about the power the Romans held over the people. Attending a spectacle like the one depicted on SE p. 63 would have made the Roman Empire seem invincible.

Review **Key Word** "Fanfare," and ask the following:

Q. Have you ever heard a fanfare? If so, where? **A.** At the beginning of a ceremony like a graduation or a wedding, or when Royalty is being introduced.

Q. Why are fanfares played? What is a fanfare supposed to do? **A.** It makes everyone quiet and pay attention, it gets people excited to see what's coming next.

Have students read **Reality Check? What do we know about Roman Trumpets?** (SE p. 65) and ask the

following questions:

Q. How do we know so much about Roman trumpets? **A.** Because ancient writers described them and images of them appear on artwork and stone carvings.

Q. What are the major differences between the *tuba* and *cornu*? **A.** The *tuba* is straight and the *cornu* is bent into a circle with a wooden bar to stabilize it. The *tuba* is short and the *cornu* is long.

Q. How does the difference in length affect the notes that can be played,

6 When the procession set off again, the other 100 trumpeters joined in. They were playing a shorter, straight trumpet called the *tuba*, which sounded loud and piercing, like the Greek *salpinx*. These incredible Roman trumpets echoed around the walls of the gigantic stadium, sounding more like two thousand instruments than two hundred! Ragnar felt goose bumps as he watched in amazement.



Roman Tuba

Ragnar couldn't wait to see what happened next, but his friends said they all had to leave as there were more important things to do. They left the Colosseum and took Ragnar to visit a nearby Roman army camp to see where the military trumpeters trained. There were so many players that they had to follow a leader who helped them to start together and to play without any mistakes. Everything in the Roman army had to be absolutely exact. It was a matter of life or death! One of the leaders gave Ragnar a *tuba* to see how well he could play. Because he had been listening very carefully, he was able to copy the call exactly:



Taratantara, Taratantara,
Taratantara,
tantara, tantara!

Next Ragnar was given a *cornu*, like the ones he had heard at the Colosseum. This instrument was very long and could play many notes. Ragnar played the same fanfare he had heard while the crowd was cheering for the Roman emperor:

To, Todo To, To, Taaaa,
Taaa, Ta, Ta, Tiiii!

The leaders were amazed by Ragnar's playing and assigned him to learn the *cornu*. After a week of training, the entire army started preparing for a long march to a place called **Britannia, on the** 7 farthest edge of Roman territory. Ragnar was now a *cornu* player in a Roman legion and was off to defend the Roman Empire!

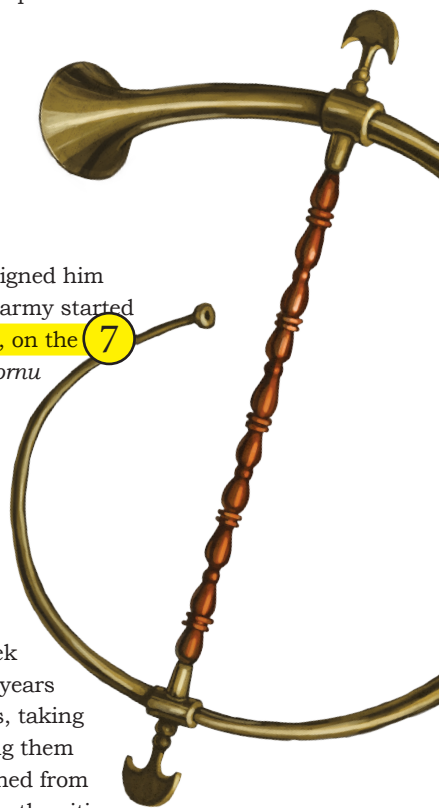
REALITY CHECK!

What the Experts Say About RAGNAR IN ROME

In our story, Ragnar travels forward in time from Greek civilization to the time of the Roman Empire. For 500 years the Romans traveled far and wide, invading new areas, taking them over, plundering their riches and then controlling them with their army. Eventually the Roman Empire stretched from Northern England to Africa. But after centuries of rule, the cities began to fall and the soldiers walked away from their battlefields and went home.

What do we know about Roman trumpets?

According to experts, the Romans used **three basic types of trumpets:** 8 the *cornu*, the *tuba*, and the *lituus*. They had learned about these from the **Etruscans, another people who lived in northern Italy.** 9 We know a great deal about Roman trumpets because images of people playing them have been found on pottery, artwork, stone carvings, and in the writings of ancient authors. The *lituus* was most often used for funeral processions and religious ceremonies. The *tuba* and the *cornu* were used in war and for gladiator contests, drama performances, and other important events.



spans over 2,800 years. According to Roman mythology, it was founded in BCE 753 by Romulus and Remus as a small settlement on the banks of the River Tiber. Rome grew to become the political and cultural center of the Roman Empire, reaching its zenith in the early 2nd century CE under Emperor Trajan's rule, and spanning large parts of Europe, North Africa, and the Middle East. Even after Emperor Constantine the Great moved the capital to Constantinople (modern-day Istanbul) in CE 330, Rome retained its significance as a vital historical and symbolic city.² (Reality Check! SE p. 65)

3 The Colosseum, also known as the Flavian Amphitheatre, is one of ancient Rome's most iconic landmarks. Built between CE 70-80 under Emperors Vespasian and Titus, it was the largest stadium in the Roman Empire, capable of seating between 50,000 to 80,000 spectators. This grand arena wasn't just for gladiatorial contests but also hosted diverse spectacles like animal hunts and mock sea battles. Its massive size and impressive architecture showcased Roman engineering while serving the public's insatiable appetite for entertainment. The Colosseum was just one of many arenas across the Empire, and historians believe there were over 200 stadiums and amphitheaters spread throughout Roman territories. These ranged from small-town amphitheaters to grand arenas in major cities, all serving as hubs for communal gatherings and displays of Roman culture. The Roman games held in these arenas were often brutal yet spectacular. They featured gladiators fighting to the death or surrender, executions of criminals as public punishment, and dramatic battles against wild animals brought from across the empire. These events entertained the masses while reinforcing Roman ideals of order, discipline, and imperial power over conquered lands.³

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and why could this be useful on the battlefield? **A.** The longer *cornu* could play more notes, and lower notes. Lower notes can be heard over a greater distance which could be helpful when trying to signal to troops far away.

Science of Sound: Point out that lower frequencies can be heard over greater distances in both air and water, and that some whales can produce a sound that can be heard up to 10,000 miles away.¹² Have students look at a globe, and using a scale of miles on the key, ask them measure how far this is in an ocean.

Remind students about Ragnar's visit to the Roman Army camp on SE p. 64, drawing attention to the fact that the Romans were famous for their discipline.

Q. How do you think the trumpeters in the Roman legion were able to play perfectly together? How do large numbers of musicians in bands and orchestras play perfectly together?

A. By following a conductor, or leader, like a drum major in a band.

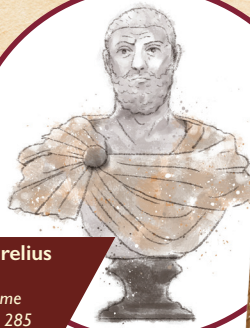
Q. What if there is no conductor, and one of the players is responsible? How

4 The Roman Empire saw the most extensive use of trumpets in the ancient world. Elsewhere during the period, trumpeters were usually heard singly or in pairs, whereas at the height of the Roman Empire, each Roman Legion had upwards of 70 trumpeters. The Roman armies must have employed around 2,000 trumpeters in total!⁴ Witnessing the historical spectacle depicted in this chapter at the Colosseum certainly would have been an extraordinary experience for Ragnar, having come from Greece where trumpeters mainly performed solo engagements.

5 *Cornu* is the Latin word for “horn.” The original Etruscan (Key Point No. 10) version of the *cornu* was modeled on an animal horn, semi-circular in shape, and 3-4 ft in length. Several Etruscan *cornua* (pl.) unearthed in Tuscany are housed in the British Museum. They were typically made from bronze sheet metal with detachable cast mouthpieces, often with features and dimensions similar to modern brass mouthpieces.⁵ Like animal horns, Etruscan *cornua* were conical, which could have had the effect of producing something close to a pure harmonic series. The Roman *cornu* was significantly longer, sometimes doubling or tripling the length of the Etruscan version, and largely conical. This design is described as forming the letter “G,”

DID YOU KNOW?

At the height of the Roman Empire, each legion of soldiers (over 5,000 men) included around 70 trumpeters playing the *tuba* and the *cornu*. There is a record of 100 *cornu* players and 100 *tuba* players performing at the games organized by the Roman emperor Carinus, 1,700 years ago!



Marcus Aurelius Carinus
Emperor of Rome
from CE 282–285

The *tuba* was similar to the shorter version of the *salpinx*. It was usually around three feet in length and could probably play four or five harmonic notes. The *tuba* was used to give commands to the troops during the course of the day’s activities and in battle.

The *cornu* was a very long trumpet, between ten and twelve feet in length. It circled around the shoulder of the player. Because the *cornu* was so long, it could play many harmonic notes, from very low to very high. The *cornu* was sometimes pictured playing with a *hydraulis*, a type of organ powered by air pumps and water. When the two instruments played together, the *cornu* probably played melodic music. When it was used in the army, some experts think the *cornu* might have played lower notes because it was a signaling instrument and these could be heard for a greater distance across battlefields than high notes. **It was played whenever the Roman standard—the flag of a Roman legion—was moved.** For the enemy soldiers, it represented the massive power of the Roman Empire, which they were about to confront in battle. They must have been terrified long before they began to fight!

What did Romans play on the *tuba* and the *cornu*?

Before and during the time of the Romans, trumpet players did not keep records of the actual music they played. It is almost certain that they learned everything by listening and copying, sharing music from teacher to student. There is one description, however, by the Roman historian Ennius, who wrote about the terrible “taratantara” of the Roman trumpets.

Etruscan *Lituus*

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Learning Activities, cont.

could someone play and conduct at the same time? **A. By counting-off before playing, by a visual cue (moving to show the start and finish), or with a breath**

Show videos of brass or string chamber groups to give students ideas on how musicians can play together without a conductor.

SPECIAL PROJECT #1

Have students go on a hunt for images and information about Roman trumpets in their books, using the Table of Contents to find the Glossary and Index. Split

students into three groups, one each for the *cornu*, *tuba*, and *lituus*, and have them look up all references to the trumpets. Ask them to take notes on their findings, compile, and share with the class.

SPECIAL PROJECT #2

After the discussion about how to lead a large group of trumpeters in the context of a Roman Legion, divide students into two groups, one for the *cornu*, and one for the *tuba*. Have each group choose something to play that they know well, and ask them to come up with ideas on how to play perfectly together without a conductor. You may need to suggest that each group

chooses a leader, and help students with the following as needed.

- I. All followers must have their eyes on the leader.
- II. The leader must do something clear and consistent for the group to have confidence to know when to play, like a loud count off, a visible rhythmic breath, or a visual cue (such as lifting the bell slightly on the inhale beat, and lowering it at the inception of the sound).

Have the students practice together, and then pit the *cornicens* against the *tubicens* for a friendly trumpet battle.

CHAPTER 9 PRACTICE CAVE

EXERCISES!

LONG NOTE EXERCISES

- Hold a lower, middle, and higher note for **16-18 seconds**
- **Challenge!** Practice playing loud-soft-loud **over 4 seconds**



HARMONIC NOTE EXERCISES

- 1
- 2 **Challenge!**
- 3
- 4

ARTICULATION EXERCISES

- 1^{a.} 2^{a.} 3^{a.}
- 1^{b.} 2^{b.} 3^{b.}

MAKE MUSIC!

IMPROVISE

- A *cornu* fanfare for the emperor
- A *tuba* “taratantara” battle call

PLAY ALONG

- 1 Parade into the Colosseum
- 2 *Cornu* fanfare for the emperor
- 3 *Tuba* “taratantara” battle call
- 4 **Challenge!** *Tuba* “taratantara” battle call

REMEMBER

GET READY,

GET SET,

PLAY!

LISTEN & PLAY ONLINE

Sound files for this page are available
at www.practicecave.com

ARE YOU A MUSIC READER? Follow along with music notation for these exercises on page 88.

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bringing the bell back around to the front and requiring a stabilizing bar to hold and protect the instrument from damage in use. Numerous depictions of *cornicines* (cornu players) holding *cornua* in Roman art clearly demonstrate its form and function. One of the most famous appears on Trajan’s Column in Rome, completed in 113 CE and celebrating Emperor Trajan’s victories in the Dacian Wars. Two complete specimens of Roman *cornua* were excavated in Pompeii and are currently held at the *Museo Archeologico Nazionale* in Naples.⁶ One of these has a very modern looking bell flare, which would help to radiate sound more efficiently (increasing the potential for loudness) and have the effect of bringing the natural notes into a closer harmonic relationship, especially in the lower register.⁷

- 6 Like the *cornu*, the *tuba* (Latin for “trumpet” or “tube”), has Etruscan origins. Although there are numerous depictions of the *tuba* in Roman iconography, only one (mostly complete) instrument survives. It was discovered in Hungary and dated to the 2nd Century CE.⁸ The many iconographical representations of the *tuba* show some variety, especially in overall length and bell shape.⁹ They tend to be between 3-5 ft in length

Practice Cave

Long Note Exercises

Holding notes at different pitch ranges for longer durations on one breath requires better efficiency in sound production. See Teaching Tips (TE p. 93) for more ideas on how to increase efficiency.

Practice playing loud-soft-loud over 4 seconds with a metronome set to 60. The goal should be to get to the same dynamic level at the end (beat 5) as at the beginning. Again, ask students to first learn this exercise by singing, until they can make a consistent pattern, with the lowest volume

coming on beat 3. This is a great test for the efficient control of sound production.

Harmonic Note Exercises

These exercises expand on those found in Ch. 8. They are designed to increase speed and facility when moving between three notes of the harmonic series. For Nos. 1 & 2, as always, try first by singing, with solfege and/or with vowels:

“Dooo-Sooool-Dooo-Miii, Do-Sol-Do-Mi, Dooo”

“AAH-OHH-AAH-EEE, AH-OH-AH-EE, AAAH”

Challenge! Nos. 3 and 4 are designed to keep a consistent tongue position while alternating between slurring and articulation of the eighth note pattern. First have students sing with vowels and articulations:

“TOH-AA-EE-AA, TOH-TAA-TEE-TAA, TOH-AA-EE-AA, TOH”

Articulation Exercises

The goal of No. 1 is to achieve a long slow crescendo over an extended fanfare pattern for musical effect. Practice with singing and/or blowing with air and articulation before playing on the trumpet. Encourage students to start as softly as possible, with a gradual

with a cone-shaped bell, like the Greek *salpinx*, but some of them have a modern looking bell flare like the Pompei *cornu* mentioned in **Key Point** no. 5.

7 The term "Britannia" originates from the Latin name used by the Romans for the islands of Great Britain. It is derived from the Greek word "Prettanike" or "Brettaniai," which referred to a collection of islands with Great Britain being the largest. The Romans adopted and adapted this term to "Britannia" when they began their conquest of the island in 43 CE under Emperor Claudius. "Britannia" came to symbolize the Roman province of Britain, now known as Great Britain, which includes England, Scotland and Wales.

8 The Romans had a fourth type of trumpet, the *bucina*, whose definition is less certain than the *tuba*, *cornu*, and *lituus*. The term *bucina* is believed to come from "bucca" (cheek or mouth) and "canere" (to sing or sound), meaning "mouth-sounder" or "instrument played with the mouth." There is confusion about what the term actually denotes, with some sources suggesting it was an animal horn or conch shell, and others stating it was a metal instrument like the *lituus* or *cornu*. Some suggest that the term *bucinator* (*buccina* player) may have been used to describe players' duties rather than the instrument used.¹⁰

9 The Etruscans were renowned for their metalworking skills, excelling in

PRACTICE CAVE CHAPTER 9

When in Rome...

EXERCISES!

LONG NOTE EXERCISES

- Hold a lower, middle, and higher harmonic note for **16-18 seconds**
- **Challenge!** Practice playing loud-soft-loud **over 4 seconds**



HARMONIC NOTE EXERCISES

1 2

Challenge!

3 4

ARTICULATION EXERCISES

1 *mf* *ff*

2 *mf* *ff*

3 *mf* *ff*

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Practice Cave, cont.

crescendo, in order to achieve the effect:

“DatDat, Daaa-DatDat, Daaa-DatDat, Daaa-DatDat, DAAA-DATDAT, DAAAAAAA”

“TütTüt, Tüü-TütTüt, Tüü-TütTüt, Tüü-TütTüt, TÜÜ-TÜT-TÜT, TÜÜÜÜ”

No. 3 is one of the most challenging rhythmic figures for beginning level players. In order to help place the sixteenth notes just before beat three, have them first sing

the passage, pulsing the sound strongly on beat 2. Try also with air and articulation before playing on trumpet:

“TaaaAanTatTatTaaaa(rest), ...”

Improvise

Reflecting on discussions regarding **Key Point** No. 10 and the final paragraph on SE p. 66 about "Taratantara," have students improvise and share their ideas with the class. These improvisations can be used for **Special Project #2** on TE p. 90

Play Along

These pieces contain motivic building blocks that can be used to make other march or fanfare-like music consistent with the types of thematic material brass players will encounter in all sorts of repertoire. It is important to break the pieces down into one or two measure segments before having students attempt to play the entire piece.

For No. 1, as in Articulation Exercise No. 3, have students pulse the sound on beat 2 in

MAKE MUSIC!

IMPROVISE

- A *cornu* fanfare for the emperor
- A *tuba* “taratantara” battle call

PLAY ALONG

- 1 Parade into the Colosseum



- 2 *Cornu* fanfare for the emperor



- 3 *Tuba* “taratantara” battle call



- 4 **Challenge!** *Tuba* “taratantara” battle call



bronze, iron, gold, and silver. They developed advanced techniques for casting, engraving, and decorating, creating items including weapons, tools, jewelry, household goods, and trumpets. Their metalwork was both functional and artistic, with intricate designs influenced by their own culture and interactions with Greeks and Phoenicians. Etruscan bronzes were particularly noted for their quality and craftsmanship, significantly boosting their economy and trade. Their expertise greatly influenced early Roman metalworking techniques. (See also SE p. 44 & **Key Point** No. 2, TE p. 61)

- 10 Although the actual signals played on Roman trumpets are lost to history, there is evidence that specific trumpets were used in military, civic, and ceremonial contexts. The signal referred to here is called the “classicum,” a call reserved for the *cornu* that was played when the standard (battle flag or emblem) of a legion was moved, representing the authority of the High Command and the Emperor. Sources indicate that the *cornu* and *tuba* were sometimes played together in the context of actual battle. Additionally, Roman *cornua* and *litui* are seen together in depictions of funeral processions, and *cornua* and *tubae* are depicted at games, as shown in the illustration on SE p. 63.¹¹

mm. 1 and 3 in order to help the placement of the sixteenth notes just before beat 3. In this case, sing the rhythms like this:

“DaaaAaanTaDaDaanDaan,DaaaAaan
 TaDaDaan(rest), ...”

Sing No. 2 first with solfège to learn the melody while becoming familiar with the rhythms, then sing with articulations before attempting to play:

“Dat-TaDaDatDatDaan(rest),DaanDaan-
 TaDaan(rest), ...”

No. 3 is a simple rendition of Roman historian Ennius’ “taratantara.” First have students say it along with the sound files to learn how the syllables line up with the rhythms, and then try it with air and articulation before playing:

“Tara,TaanTara(rest)Tara,TaanTara(rest)...”

“TüTü,TüüüTüTü(rest), ...”

For No. 4, be sure to first sing with solfège before attempting to play on the trumpet.

Teaching Tips

Singers are able to create a great deal of resonance without expelling enormous amounts of air. This is also possible on brass instruments. Try this experiment: Ask students to put one hand on the sternum and have them sing a note at moderate volume, then have them blow air through a formed embouchure. The chest will fall faster when blowing air than singing. Encouraging students to make playing feel more like singing than “blowing air” can increase efficiency.

Summary

In Chapter 10 Ragnar travels to the northernmost edge of the Roman Empire, to Hadrian's Wall in Britannia. There he encounters the Celtic people (Celts) and their frightening trumpet, the *carnyx*. Ragnar's courage is tested, but because he has trained well and is able to focus on the task at hand, he survives the ordeal. Throughout the narrative, students will learn about Celtic culture, trumpets, and warfare, before learning how to play battle cries and fanfares that might have been played on Roman or Celtic trumpets.

Objectives

Students will:

- **Contemplate** the difficult journey from Rome to Britannia for a Roman soldier
- **Investigate** the Celts and their trumpet, the *carnyx*
- **Understand** how the Celts were able to defend their land against the Romans
- **Consider** how learning to focus on detail in practice can help students play well even if they experience nervousness during performance.
- **Learn** to play calls that reflect the way Roman and Celtic trumpets were used in battle.

CHAPTER 10

AT THE EDGE OF EMPIRE



RAGNAR AND THE ROMAN ARMY set off on a journey **1**

to the edge of the Empire, marching north across an immense mountain range known as the Alps, and on towards the sea. They then sailed a short distance to the island of Britannia. As they started marching north again, Ragnar's fellow trumpeters told him **2** stories about the fearsome Celts, whom they were about to face in battle. During the journey, one of the soldiers showed Ragnar a coin **3** that pictured a *carnyx*. He realized immediately that it was a kind of trumpet. It looked as though the players held it straight up in the air and it seemed to have a bell shaped like the head of a wild animal. Ragnar gulped. It looked terrifying!

After several more weeks of marching, the army arrived at **1** the wall that the Romans had built across Britannia to keep out the Celts. It was a beautiful sunny day. The grass was so green, and there were no Celts to be seen. But they were not far away! A horrible noise suddenly came from the other side of the wall. It sounded as though thousands of men were shouting and screaming along with the frightful sounds of the *carnyxes*. The first thing Ragnar could see was the heads of 50 *carnyxes*! The Roman soldiers were quickly ordered into battle formation. As the terrible sound got closer, Ragnar could feel his heart pounding. Then, the *cornu* and *tuba* players were ordered to sound the call to attack:

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Learning Activities

Read or listen online to **Chapter 10: At the Edge of Empire**, and review **Key Point** No. 1. Show students a topographical map of Europe and trace Ragnar's journey north from Rome, across the Alpine mountains, through France, and then across the English Channel to England. Discuss how difficult and lengthy the journey would have been. Then locate Hadrian's Wall and point out that it would have taken another three to four weeks for Ragnar's legion to make the additional 350 mile trek. Pose the following questions to encourage discussion:

- Q.** During the journey, what did Ragnar's fellow trumpeters tell him about who they would face in battle in Britannia?
A. Fearsome Celts, and their trumpet, the *carnyx*.
- Q.** How did Ragnar first realize that the Celts were nearby?

A. The sounds of a thousand men screaming along with the sound of the Celtic trumpets.

Q. How did Ragnar feel? **A.** His heart was pounding, he was terrified—more scared than he had ever been before in his life.

Q. How did Ragnar deal with his fear? **A.** He followed his orders and concentrated on playing his *cornu*.

Point out that people in sports, music, acting, and public speaking sometimes feel afraid or anxious, but they can learn how to perform their best by focusing on the details of what they are doing, keeping the mind occupied by the task at hand. Ask students if they have ever had to do an activity that made them afraid or anxious. Ask them to think about how they can be successful even when feeling external pressure. Explain that when it comes to playing music, learning to focus on the details

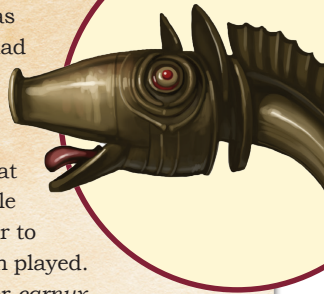
Tarantara,
Tarantara,
tantara,tantara!

On hearing this battle call, the Roman soldiers began a steady march towards the Celts, who were climbing over the wall and heading for them at full speed! Some of the Celtic warriors were huge. They wore little clothing and had their skin painted with symbols. They carried long spears and swords, and the noise from their *carnyxes* was deafening. Ragnar was more scared than he had ever been in his whole life, but he was very brave, followed his orders and blew his *cornu* as if his life depended on it.

It was a terrible battle, but finally the Celts retreated back over the wall! The Romans had succeeded in fighting them off but had lost many soldiers. The remaining troops started to march south again, and along the way heard the news that **the emperor had decided to pull all Romans out of Britannia.** Ragnar was very relieved!

DID YOU KNOW?

Images of the *carnyx* have been found on monuments, Roman coins and other objects. A boar's head that may have belonged to a *carnyx* was found in Dexford, Scotland and is estimated to be 1,800 years old. It is said that when it was found, it had a tongue attached with springs that would rattle and appear to move when played. Many other *carnyx* pieces have been found in France, Germany, England, and Italy. The most complete remains were found in 2004 in Tintignac, France, and scientists were able to use the pieces to reconstruct the instrument and study its sound properties. They think that the very large ears on the animal at the top may have been constructed in a way that caused a vibrating sound when the instrument was played. No wonder the Celts' enemies found the instrument frightening!



Key Points

- 1 Roman rule in Britannia began with Emperor Claudius' invasion in CE 43, led by Roman General Aulus Plautius.¹ Despite initial resistance from indigenous tribes, Britannia became a Roman province governed by a strong military presence. The Romans established numerous settlements, cities, and fortresses, particularly in England and Wales, many of which still exist today—including London, York, Winchester, Bath, Exeter, and Gloucester. They introduced advanced agricultural practices, mining, and trade networks, and many Britons (conquered natives) adopted Roman laws, customs, and the Latin language. Notable resistance to Roman rule included Queen Boudica's uprising in CE 60-61 and continued conflicts with northern tribes, including the Picts, as depicted in this chapter (See Key Point No. 2). This led to the construction of two walls, first Hadrian's Wall in CE 122 and then the Antonine Wall in CE 142. The former, built under the reign of Emperor Hadrian, was a 73 mile-long defensive wall, stretching across the width of Britannia. Roman mouthpieces found at both walls confirm the presence of Roman trumpets.² The Picts, along with other Celtic tribes, continued to clash with the Romans until their withdrawal around CE 410.³

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of what makes the music sound good while practicing will help make it sound good in performance, even when feeling a bit nervous. Refer back to this point during practice and rehearsal when students become distracted.

Review **Key Point** Nos. 2 and 4, and ask students to read **Reality Check!** SE p. 70. Ask them to find the moments in the story that describe the Celts in battle (p. 68-69, and p. 70, first and last paragraph). Point out that the people with painted bodies at Hadrian's Wall were actually called the Picts, which comes from the word "picti" meaning painted ones, then pose the following questions:

Q. Rome ruled Britannia for almost 400 years, but they built a wall to keep the tribes from the north away. Based on what we've read, why do you think the Romans decided to build a wall

rather than try and conquer the Picts? **A.** Because the Romans were afraid of them, having faced them in battle.

Discuss the idea of guerilla warfare (military operations carried on by smaller forces with the objective of harassing, delaying, and disrupting the enemy) and relate it to how the Picts fought. Find and show students images of Roman battle formations & tactics before asking the following questions:

Q. What were some of the differences between how the Romans fought and the Picts fought? **A.** Picts: unpredictable, disorganized, naked, crazy, loud. Romans fought in an organized way that protected the entire group.

Q. What do you think were some advantages, and disadvantages of both? **A.** Since Picts knew the land, they could take the Romans off guard and strike them when they weren't expecting

Key Points, cont.

2 See **Reality Check!** SE p. 70. The Celts were diverse groups of peoples who lived across Europe during the Iron Age and into the Roman period, known for their warrior culture, artistic achievements, and intricate metalwork. They occupied regions from the British Isles to Turkey. In England, the Romans encountered tribes such as the Iceni, Brigantes, and Trinovantes, and in Scotland, they met the Caledonians and Maeatae, known as Picts. “Picti” means “painted ones,” likely referring to their body painting or tattooing. The Picts (represented in the illustration on SE p. 70) were inhabitants of northern Britain from CE 297-858, who fiercely resisted Roman invasions. Their rich cultural legacy, marked by distinctive art, language, and symbolism, set them apart from other Celtic tribes and remains a significant part of Scotland’s early history.⁴ More broadly, the Celts’ legacy persists today in the cultural and linguistic traditions of Ireland, Scotland, and Wales.⁵

3 See **Did You Know?** SE p. 69 and **Reality Check!** SE p. 70. There are many sources of evidence from the Iron Age and through the Roman period that show representations of *carnyxes*. They are depicted on stone carvings (reliefs), coins of Greek, Roman, and native European (Celtic) origin, figurines, and even a large silver cauldron.⁶ These iconographic representations have been found in Scotland, England, France,

REALITY CHECK!

What the Experts Say About

THE CELTS AND THE CARNYX

The Celts were not just one group but many groups of people or tribes who shared similar languages, beliefs, and behavior. Many lived in areas north of the Alps, including present-day Ireland, Wales, Scotland, England, and France. The Celts were known for being fearless in battle. They often fought with no armor or even clothing, but would sometimes paint their bodies in the belief that their gods would protect them.



Because the Romans feared the Celts and other enemies, they built two walls in Britannia, or what is now known as Britain, to keep them out. One of the walls, named after the Roman emperor Hadrian, crosses northern England just south of the Scottish border. A few of the Roman trumpeters’ detachable mouthpieces have been found near Hadrian’s Wall so it is possible that a battle took place there.

3 The Celts were known for the sound of their trumpet, the *carnyx*, one of the most fearsome trumpets ever used. Because its use was so widespread, it came in many shapes and sizes, but they were all probably held upright, with the head of a boar, a serpent or some other animal at the top. Some of the longer instruments could be up to six feet in length.

What sounds did the Celts play on the *carnyx*?

Some ancient writers described the sound of a *carnyx* as high pitched. But we can guess, based on its length, that it could play several notes, some of them quite low like the Roman *cornu*. Whatever sounds it made, the *carnyx* must have frightened the Celt’s enemies.

4 Roman historian Polybius wrote that the Romans “were terrified by the fine order of the Celtic army and the dreadful din—for there were innumerable horn-blowers and trumpeters and, as the whole army were shouting their war cries at the same time, there was such a tumult as if not only the soldiers but all the country around had got a voice and caught up the cry.”

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it. The Romans, once in battle formation, would have been difficult to break.

Q. Do you think their trumpet, the *carnyx*, helped them in battle? If so, how? **A.** By making the Romans afraid.

After reviewing **Key Point** No. 3, have students review **Did You Know?** on SE p. 69, and the final two paragraphs on SE. p. 70. Explain the term “zoomorphic” and ask students if they can find another example of a zoomorphic instrument in the book, posing the following questions:

Q. What is it called, where was it found, and how is it similar to or different from the *carnyx*? (SE p. 44, TE p.) **A.** Celt-Iberian Clay Trumpets were found in Spain. Some of them have animal heads like the *carnyx*. They are different in that they are curcular, made of clay, and very short, but both are from Celtic tribes.

Q. How long was the *carnyx*? **A.** up to six feet

Q. How many notes could it play? **A.** several

Ask students to look at SE p. 10-11 to see what other trumpets from the ancient world were as long as a *carnyx*, and then look at p. 8-9 to see how many notes comparable instruments could play.

SPECIAL PROJECT: Romans vs. Celts

Divide students up into two groups—the Romans and Celts—and have them create battle calls based on what they know about the way that each side’s trumpets were used in battle. Have students practice in class, and then pit the groups against each other in a school performance. First have each group play their call by itself, and then have them play simultaneously, before giving the audience a chance to pick a winner through applause. Consider making some simple costumes for extra fun!

CHAPTER 10 PRACTICE CAVE EXERCISES!

LONG NOTE EXERCISES

- Hold a lower, middle, and higher note for **18-20 seconds**
- **Challenge!** Practice playing loud-soft-loud **over 8 seconds**



HARMONIC NOTE EXERCISES

- 1
- 2
- 3
- 4
- Challenge!** 5
- 6

ARTICULATION EXERCISES

- 1 a. b.
- 2 a. b. c.

MAKE MUSIC!

IMPROVISE

- A *carnyx* battle cry
- A *cornu* call to prepare for battle

PLAY ALONG

- 1 *Carnyx* battle cry no.1
- 2 *Carnyx* battle cry no.2
- 3 *Cornu* call to prepare for battle
- 4 **Challenge!** “Taratantara” signal to attack!
- 5 Song for the fallen soldiers



LISTEN & PLAY ONLINE

Sound files for this page are available at www.practicecave.com

ARE YOU A MUSIC READER?

Follow along with music notation for these exercises on page 90.

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Germany, Switzerland, Denmark, and Hungary, demonstrating the prevalence of the *carnyx* in Iron Age Celtic lands. Additionally, there have been numerous archaeological finds of actual instruments—complete and in fragments—some of which have been reconstructed and can be played.

The term *carnyx* didn't appear until a thousand years after the instrument fell out of use. It was first written “*karnyx*” in medieval Greek sources, and its root—*keras*, meaning horn—is similar to terms in other languages, including Latin *cornu* and German *horn*. Contemporary writers did not refer to the Celtic trumpet as *carnyx* (or *karnyx*), but rather used familiar terms such as *tuba*, *buccina*, or *salpinx*.⁷

The *carnyx* is a zoomorphic instrument, often featuring the head of a boar, which held significant symbolic and cultural importance for Iron Age Celtic tribes.⁸ The wild boar was revered as a powerful and sacred animal, associated with strength, courage, and ferocity—qualities highly valued in warrior societies. The likely precursor to the *carnyx* is the Etruscan *lituus*, a J-shaped hybrid instrument originally fashioned from an animal horn and tube. Construction techniques of joining sheet metal show striking similarities between various *litui* and

Practice Cave

Long Note Exercises

These exercises require a considerable degree of breath control and efficiency, especially when playing loud-soft-loud over 8 seconds. The goal should be to get to the same dynamic level at the end (beat 9) as at the beginning. Set the metronome to 60 and ask students to sing while counting numbers. Make sure the volume at count 1 is loud before decreasing volume to very soft at count 5. Volume should then be increased to count 9. Sing this a few times before trying on trumpets.

Harmonic Note Exercises

These exercises require increased facility and pitch accuracy, while extending the range to C in the staff. Practice Nos. 1-4 first by

singing with solfege syllables, and then vowels to experience the shift in tongue position, before trying on the trumpet.

No. 1: “Dooo-Sooo-Miii-Dooo,” then: “AAH-OOH-EEE-AAH”

No. 3: “Do-Mi-Sol-Si-Dooo”

Nos. 5 & 6 indicate the technique of glissando, which requires playing all harmonics from the lowest point to the highest, in a sweeping motion. Have students sing the octave in No. 5 with vowels, from “AAH” to “EEE,” encouraging the motion of the vowel change to be somewhat gradual throughout the pitch change. Have them increase volume during the shift to get a feel for the energy required to create the glissando effect. Try on the mouthpiece before playing on the trumpet.

Key Points, cont.

carnyces, and it is possible to reconstruct how an animal head was built on top of a horn-shaped bell termination.⁹ Music archeologists and acousticians who have studied *carnyces* marvel at the makers' extremely high level of technical mastery. For example, a study of the bronze alloy used to make one of the *carnyces* discovered in Tintignac, France, revealed a very high degree of precision, resulting in a highly malleable yet durable metal, which may even have enabled its very large ears to vibrate, producing an eerie ringing sound while played.¹⁰

- 4 See **Reality Check!** (SE pg. 70) Celtic tribes used surprise attacks and quick, hit-and-run strategies, known today as guerilla tactics, against the Romans instead of facing the Roman army head-on in big battles.¹¹ The Celts knew their land well, so they could hide in forests and hills, making it hard for the Romans to catch them. On the other hand, the Romans fought in large, organized groups called legions. They used heavy armor, shields, and swords, forming tight lines to protect themselves and advance steadily in battle. While the Romans relied on their discipline and formations, the Celts used their speed and knowledge of the land to outsmart them. The quote from Roman historian Polybius (203-120 BCE) at the bottom of SE pg. 70 reveals

PRACTICE CAVE CHAPTER 10

At the Edge of Empire

EXERCISES!



LONG NOTE EXERCISES

- Hold a lower, middle, and higher harmonic note for **18-20 seconds**
- **Challenge!** Practice playing loud-soft-loud **over 8 seconds**

HARMONIC NOTE EXERCISES

1

MAKE MUSIC!

IMPROVISE

- A *cornyx* battle cry
- A *cornu* call to prepare for battle

PLAY ALONG

- ① *Cornyx* battle cry no. 1



- ② *Cornyx* battle cry no. 2



- ③ *Cornu* call to prepare for battle



- ④ **Challenge!** “Taratantara” signal to attack!



- ⑤ Song for fallen soldiers



the feeling of dread and chaos the Romans experienced at the hands of the Celts.¹²

- ⑤ The Romans left Britannia in around CE 410 because the Roman Empire was facing major challenges closer to home. Various invading tribes, such as the Visigoths, were attacking the heart of the empire, forcing the Roman army to focus on defending Rome and other key regions. The empire was stretched thin, and maintaining control over distant provinces like Britannia became increasingly difficult and expensive. Britannia was far from Rome, making it hard to govern effectively, and the costs of managing the province outweighed the benefits. Faced with these pressures, the Roman government decided to withdraw its troops from Britannia, leaving the local population to defend themselves. Without the Roman army’s protection, Britannia became vulnerable to new groups, like the Anglo-Saxons, who began to settle in the region, marking the start of a new era in Britain’s history.¹³

playing. Classical players create this effect, called a “lip-trill,” usually by manipulating the embouchure and/or tongue position. The important thing is to make a frightening sound!

Before attempting to play Nos. 3 & 5, sing with solfege, and then vowels (to experience the shift in tongue position). For longer note values, have students pulsate the sound to keep track of the beat while playing.

No. 3 is an idea of what the “classicum” may have sounded like—a *cornu* call that was made when the standard was moved.

(Key Point No. 10, TE p. 93)

Solfege: “DooOoohDooOhDo, SooOooOoo(rest)...”

Vowels: “DaaAaaDaaAaDat, DayAayAay(rest), DaaAaaDaaAaDat, Diiii”

No. 5 is inspired by the bugle call “Taps” that is played as a

“lights out” signal, indicating that it’s time to go to sleep in the US army. It is better known as the call that is played at military funerals and memorial services to honor fallen soldiers.

Solfege: “DooOoDoDoo, Miiii(rest), DooSolDoo, Miiii(rest), DooOoSolMiii, DooOoSolMiii, Doooo”

No. 4 is a more technically advanced rendition of Roman historian Ennius’ “taratantara.” First have students say it along with the online sound files to learn how the syllables line up with the rhythms, and then try it with air and articulation before playing:

Singing: “Tara, TaanTara(rest)Tara, TaanTara(rest)Tara, TanTaraTanTaraTanTara”

Air and articulation: “TütDüt, TüüüTütDüt(rest), ...”

Summary

In **Unit III Wrap Up**, students will consider the importance of lip-blown instruments in Greek, Roman, and Celtic civilizations, and think about how their use helped to shape history. Students will review **Make Music!** pieces from Unit III and read **There's No Place Like Home!** before discussing the area of France where Ragnar's fictitious cave was located, and the Paleolithic (Old Stone Age) history it represents. Finally, students will consider how stone is used to this day for making all sorts of lasting structures, forming an enduring connection between the present and the distant past.

Objectives

Students will:

- **Contemplate** the uses and significance of lip-blown instruments for the Greeks, Romans, and Celts
- **Review** the narrative and **Make Music!** pieces from Unit III
- **Discuss** the area in France where Ragnar's cave was located and the history it represents.
- **Consider** how making important lasting structures out of stone has continued in modern times.

UNIT III WRAP UP

DO YOU REMEMBER?

- 1 Which kind of *salpinx* did Ragnar play on the Greek warship?
- 2 When did Ragnar "mess up" when playing? What did his teacher tell him?
- 3 What technique did Alexander tell Ragnar to practice in order to play low notes softly?
- 4 Name three uses for the *salpinx* in ancient Greece.
- 5 What instrument was used to play a fanfare for the Roman emperor at the Colosseum?
- 6 How did the Roman *tuba* and *cornu* players stay together when they started and stopped their battle calls?

KEY WORDS

Fanfare

MAKE MUSIC

Chapter 7

- 1 Greek warship signal "Ta, TeyaTa, TeyaTiiiiiiiiiii"
- 2 Greek battle calls on "To, To, Te, To, Ti"
- 3 Song in praise of Zeus
- 4 **Challenge!** *Salpinx* dance for a street festival

Chapter 8

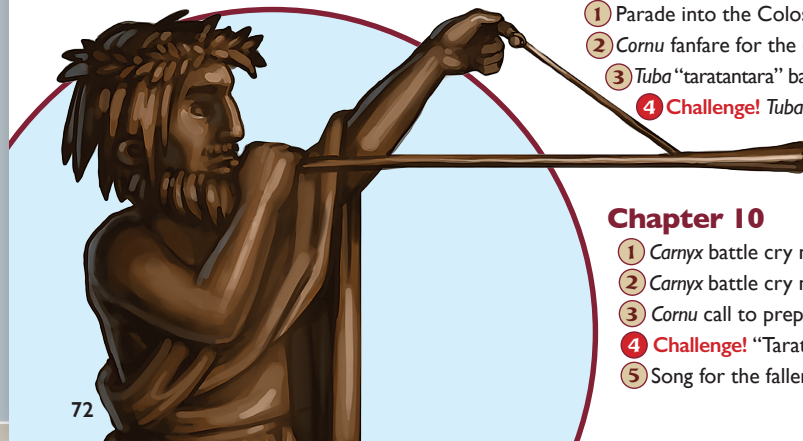
- 1 Olympic march
- 2 Olympic fanfare
- 3 Song for Olympia
- 4 **Challenge!** Victory dance!

Chapter 9

- 1 Parade into the Colosseum
- 2 *Cornu* fanfare for the emperor
- 3 *Tuba* "tarantara" battle call
- 4 **Challenge!** *Tuba* "tarantara" battle call

Chapter 10

- 1 *Caryx* battle cry no. 1
- 2 *Caryx* battle cry no. 2
- 3 *Cornu* call to prepare for battle
- 4 **Challenge!** "Tarantara" signal to attack!
- 5 Song for the fallen soldiers



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Learning Activities

Ask students the series of questions under **Do You Remember?** on p. 72. The answers are as follows:

- 1 Cup-bell *salpinx*
- 2 He grabbed the cone-bell *salpinx* and blew into it quickly without knowing how to play it, making a bad noise. Herodorus told him to be patient, take time, and practice slowly.
- 3 Aristotle told Ragnar to make his airstream slow and thick.
- 4 War, entertainment, and competition
- 5 The *cornu*
- 6 They followed a leader

Review the **Key Word** "Fanfare" (a short piece of music played

loudly by trumpets to announce the start of something important) and ask students how fanfares may have been used in Greece and Rome. **A.** In the Olympics to announce events and winners; in the Colosseum to announce the Roman Emperor.

Review the **Make Music!** pieces, recalling how each one relates to Ragnar's story, then read or listen (www.hearragnar.com) to **There's no Place Like Home** and discuss the **Key Point** No. 1, before posing the following questions:

Q. How do you think the Roman soldiers felt as they were marching back to Rome, after having lost many fellow soldiers.
A. Sad, tired, miserable, somewhat relieved

Q. How do you think Ragnar felt when he saw the entrance to his cave? **A.** Excited, his heart bursting with joy, energetic, fear at hearing "catch the deserter!"

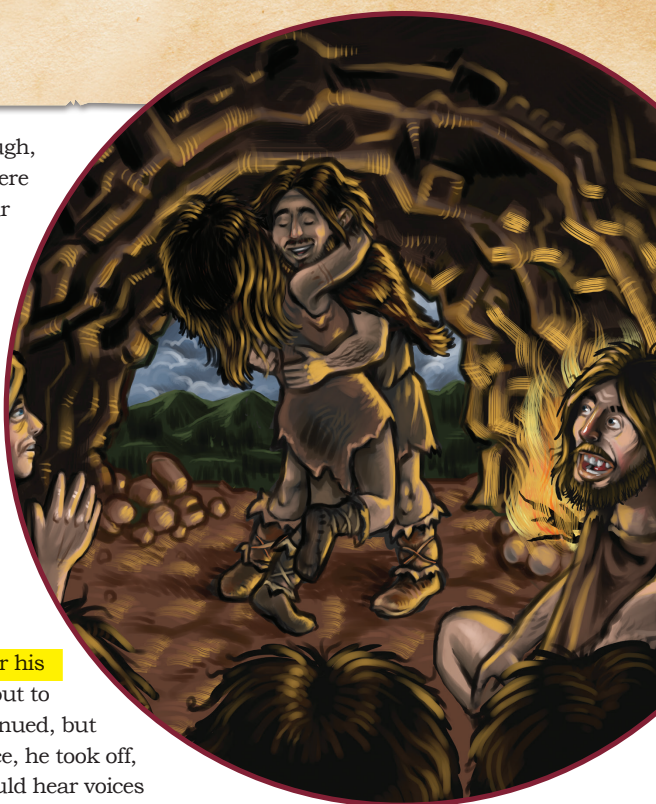
1 THERE'S NO PLACE LIKE HOME

AFTER ALL they had been through, Ragnar and the Roman soldiers were exhausted, but their ordeal was far from over. The army of nearly two thousand men marched south through Britannia, crossed the sea and then trudged back toward the Alps. It had been raining heavily and, as their boots slogged through thick mud, they all felt pretty miserable. All of a sudden, however, Ragnar felt as though he was in a familiar place. He saw a tall tree next to a large rock and wondered, "Could this be—?"

2 Ragnar realized that they were near his cave! He felt that his heart was about to burst with joy. The marching continued, but when Ragnar saw the cave entrance, he took off, running as fast as he could. He could hear voices behind him shouting, "Catch the deserter!!" but when he passed through the cave entrance, the voices stopped.

Instead, he saw and heard the most wonderful thing—his old friends and their families were sitting around a roaring fire, singing along to the sound of Annika playing the stick trumpet. When Annika saw Ragnar, she dropped the trumpet, and stared in disbelief. She ran toward him, giving him a big hug. "Where in the world have you been?" she cried.

Ragnar didn't know how he was going to answer that question. But one thing was for sure—he was incredibly happy to be home!



Key Points

- 1 This is what Dorothy says while clicking the heels of her magical slippers together in Frank Baum's novel *The Wonderful Wizard of Oz*. This allowed her to finally get back home after her amazing adventure.
- 2 The cave Ragnar returned to, as depicted in Chapter 2, (SE p. 20) is based on caves at Lascaux, located in the Vézère Valley in France.¹ This area includes fifteen UNESCO World Heritage sites. Vast quantities of archeological evidence have been discovered there—human and animal bones, flint tools, and cave paintings—spanning a time period from 400,000 years ago through the Upper Paleolithic period, c. 35,000—10,000 BCE. Because of this, the Vézère Valley is often referred to as "the world capital of prehistory." Although humans did take refuge in caves, many were far too small/narrow to be used as dwellings, so humans made use of stone, wood, and animal bones/hides, to make temporary housing for protection.² Throughout human history, stone has been used to make permanent structures, such as roads, bridges, buildings, and monuments. Large caves are sometimes compared to great cathedrals. In some ways, we are still living in a stone age!

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Summarize **Key Point** No. 2 for the students, showing images of paintings and artifacts that have been found in Paleolithic caves around the world. Point out that throughout history, humans have taken refuge in stone structures, and used stone to build important things. Remind students that Paleolithic means "old stone age," and ask them if they can think of other things made from stone from ancient history. **A. Stonehenge and other megalithic structures, pyramids, statues, buildings, roads, amphitheaters (like the Colosseum), and aqueducts**

Ask students why humans used stone, and continue to use stone, to build things, and what in the modern world is made with stone. **A. Stone is something extremely durable, that won't easily blow away in a storm. People make things out of stone that they want to last forever. Being in a stone structure makes people feel safe. Churches, temples, monuments, government buildings, homes.**

What's next?

The *Brass for Beginners* program achieves three objectives:

- Inspires an appreciation of, and curiosity about, human history through the exploration of lip-blown instruments.
- Fosters a deep understanding of how brass instruments work.
- Provides a significant hands-on opportunity to develop the skills necessary for playing any brass instrument.

In order to bring the experience full-circle, consider working with an elementary/middle school's band director, or a group of high school brass students, to introduce modern brass instruments. Ask them to explain how they work in relation to the natural trumpet, and then have demonstrations, before allowing students to try them.