

## Summary

By using the story of the battle of Jericho as its starting point, this Unit opener charts the transition from the Paleolithic to the Neolithic periods and the beginnings of the Bronze Age. It investigates the development of early civilizations and the key role played by the discovery of bronze and other metals, and the ability of people to work with them. It demonstrates the changing importance of lip-blown instruments as religion and warfare become central in the lives of ancient peoples.

## Objectives

### Students will:

- **Recount** the story of the battle of Jericho
- **Describe** the changes in living patterns between the Paleolithic and Neolithic periods
- **Identify** the characteristics of “civilization”
- **Explain** why the sound of the ram’s horn was so important to the Hebrews
- **Locate** the position of Ragnar’s story on the historical timeline and explain how lip-blown instruments evolved during the Bronze Age.

# UNIT II

## A BLAST FROM THE ANCIENT PAST

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

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



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## Learning Activities

After reading or listening to **Unit II: A Blast from the Ancient Past**, ask students the following questions:

**Q.** What were the things that Ragnar heard or saw around him that were different from the moment he disappeared in **Winter is Coming**?

**A.** Walking with a thousand people; no trees or grass, just sand (desert); a great wall; shiny objects like spears (metal weapons); white and brightly colored cloth.

Explain that large groups of people, man-made structures, metal objects and manufactured cloth are some of the characteristics of the next period of human history (the Neolithic period) and that Ragnar found himself in a famous biblical story about the Hebrews entering the city of Jericho.<sup>1</sup> Find Jericho on a map and show that

unlike Ragnar’s home, the terrain around the city was a desert.

**Q.** What kind of horn was Ragnar holding, and why did he blow it?

**A.** He was holding a ram’s horn, and he blew it because he was terrified by the angry-looking men shouting at him. Ragnar thought he might frighten them off, as this was one of the ways he used his bison horn in his prehistoric life.

Ask students to look at the red arrow in the timeline on SE p. 28, noting that it is pointing to both the Neolithic period and the Bronze Age. (Explain that bronze is an extremely durable metal, made from copper and tin.) Ask students to turn to **Meet Ragnar, Your Tour Guide** (SE p. 4-5), and ask which time period Ragnar came from. *Hint: Read “Did You Know?”*

**A.** 25,000 years ago in the Paleolithic period or Old Stone Age.

BRONZE AGE  
c. 3500–500 BCE

IRON AGE  
c. 1000 BCE–CE 50



SUDDENLY, Ragnar couldn't see. The sun was blinding. He heard many sounds around him, including sounds that were somewhat like his bison horn, but different. It took several moments before everything came into focus. Ragnar found himself walking along—just as he had with Annika and his wandering friends. But now, his old friends were gone and he was surrounded by another group—this one made up of a thousand people! There were no trees, no grass, no birds—just sand in every direction. It seemed as though the people were moving toward a great wall off in the distance. Ragnar noticed many men carrying long shiny objects that looked dangerous, like spears.

Then everyone came to an abrupt halt. Six men wearing robes stared at Ragnar in disbelief. Their heads were wrapped in white cloth, and each man held a ram's horn. As Ragnar looked down, he realized that he was holding the same type of horn. The men spoke angrily, pointing at him, and other people began to shout at him. Ragnar was terrified!

Not knowing what to do, Ragnar put the horn to his lips, hoping to scare them away. He took a deep breath and blew a brilliant

DAWEEEEEEEEEEEEEEEEEE!

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## Key Points

- 1 The highlighted details on this page show that Ragnar found himself in the Neolithic period, at the start of human civilization, when people started to live in significantly larger communities than they had done in earlier times.
- 2 As people began to live in fixed housing in large numbers, towns or cities were formed where people engaged in economic, political, and religious activities. Walls were often built around these cities to protect them from outsiders.
- 3 As the name Bronze Age suggests, the use of metal was one of its the most significant technological developments. It provided better tools for farming and construction, and swords for warfare. It could also be used in pursuit of more artistic ends, such as the manufacture of jewelry and decorative or ceremonial items.
- 4 Ragnar may already have seen cloth of some sort, as the earliest known textile material is from around 30,000 BCE.. On the other hand, the white and brightly colored cloth, probably made with a loom, would have been new to him.<sup>2</sup>

Next, ask students to turn to the **History of Lip-Blown Instruments** (SE p. 10–11, TE p. 20–21). Explain how the color-coding of the instrument labels corresponds with each time period and ask students to list lip-blown instruments from the Paleolithic period.

**A. Bone, shell, wood, animal horns, etc.**

Then ask which instruments were made in the Bronze Age, and what they were made of.

**A. Mesopotamian trumpet, Egyptian *šnb*, Hindu *sankh*, Jewish *shofar*, Oxus trumpet, made of metal, shells, and animal horns.**

Add that although lip-blown instruments began to be made from metal during the Bronze Age, instruments made from natural materials have continued to be used across the globe, right up to the present day.

Ask students to read **Reality Check!** (SE p. 31, TE p. 45) and discuss the term “civilization” and how it relates to the Neolithic period. To help students organize their thoughts, draw a vertical line to form two columns on a chalk or white board, with the headings “Paleolithic” on the left side, and “Neolithic” on the right. Then ask students questions about how people lived in each period, writing down important characteristic under each heading to highlight the differences. Some categories include: subsistence (hunting & gathering/agriculture & domestication of animals); clothing (animal skins & fur/textiles & cloth); tools & weapons (stone/metal); communication (primitive communication/language & writing); social organization (nomadic bands/fixed housing under power of kings or rulers); beliefs (cave art & shamans/organized religion & priests); and finally lip-blown instruments (bone, shell, wood, animal horns/metal).<sup>3</sup>

## Key Points, cont.

5 The conquest of Jericho by the Israelites (Joshua 5:13–6:27) is the earliest recorded example of the use of the ram’s horn (*shofar*, pl. *shofarot*) in war. Having escaped slavery at the hand of the Egyptians, the Israelites led by Moses, went to Mt. Sinai where Moses received the Ten Commandments. It was on this occasion that an exceedingly loud *shofar* blast was heard. This is the first written account (Exodus 19:16) of the *shofar* itself, and it clearly represents the power and authority of the Hebrew God. Forty years later, following God’s instructions, Joshua marched the Israelites to the city of Jericho. Led by seven priests blowing *shofarot*, they circled the city carrying the Ark of the Covenant (the gold-covered wooden chest in which were kept the tablets of the Ten Commandments) until the 7th day when they took the city by force. It is often said that it was the sound of the *shofarot* that made the walls fall, but a more precise reading indicates that the *shofar* blast was signal for the crowds to shout loudly, and it was this that caused them to fall.<sup>25</sup> Regardless, it is certain that the sound of the *shofar* had a tremendous impact on people on both sides of the battle, and its sound has continued to hold great significance for the Jewish people to this day.

Everyone was shocked and stepped back in amazement. Slowly, their anger turned to smiles and laughter. The people began dancing around him, singing at the top of their voices. One of the men gave Ragnar a brightly-colored cloth to wear around his waist as they marched toward the wall, which 5 surrounded a great city called Jericho.

For six days, the entire group circled the city, as Ragnar and the others blew their horns. On the seventh day, they circled the city again. But this time, as Ragnar and the others blew as loudly as they could, they were joined by forceful shouts from the entire group. Ragnar couldn’t believe it! The blast of the horns, plus the shouting, made the city wall collapse to the ground. They entered the city, victorious!



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## Learning Activities, cont.

Q. Ask students why they think humans created their towns or cities in river valleys.

A. The river provided water for sustenance (drinking, washing, bathing, and growing food) and transportation to facilitate trade and travel by boat.

Read **Did You Know?** (SE p. 31) and ask students if they think the sound of seven ram’s horns and people yelling at the tops of their voices could knock down a wall. Some will say yes, and some no.

(See **Teaching Tip**, TE p. 44) Explain that regardless of whether or not the sound of the *shofarot* made the walls fall, the story demonstrates the importance of the *shofar* in the Jewish religion and illustrates some of the uses of lip-blown instruments in this new period of history. These include giving courage to troops in battle, frightening the enemy, and signaling battle commands, as well as representing the power and authority of God.<sup>4</sup>

## REALITY CHECK!

What the Experts Say About

## THE NEXT PERIOD OF HUMAN HISTORY

At this point in the story, Ragnar has traveled from the Paleolithic to the Neolithic period, or New Stone Age. Approximately ten thousand years ago, people began to change the way they lived.

They went from hunting and gathering to growing food, keeping animals, and living in fixed housing. This is said to be

**8** the start of civilization.

Humans lived in larger groups known as communities, and towns or cities were later created, often in river valleys. These new communities had a king or ruler who built armies to fight other civilizations. Farming was introduced as a way of producing food, and pottery was made for storage, transportation, and cooking. Religion and ritual was important in daily life, and writing was developed using shapes and letters to keep records.

Great trade routes such as the Silk Road connected Asia and Europe. Other smaller trade routes joined communities in other parts of the world. When people met, they would often exchange goods, ideas, beliefs, art, and music. In addition, they would share knowledge of how to make things. Late in the Neolithic period, people discovered that rocks containing copper and silver could be heated, and the metal used to make tools and weapons.

**7** copper and silver could be heated, and the metal used to make tools and weapons.

## DID YOU KNOW?

**6** Of all the trumpets used in ancient history, we know the most about the ram's horn, or *shofar*.

This has been played by the Hebrews, (or Jews) for over three thousand years, and is still played to this day in Jewish places of worship called synagogues. The

**5** most famous story about the *shofar* is

found in the book of Joshua,

a section of the Old Testament. The story says that the Hebrews had been wandering for forty years without a home, but were told by God to go back to the Holy Land and take control of the city of Jericho. For six days, the sound of the *shofar* circled Jericho as seven priests played their instruments outside the walls. On the seventh day they circled the city seven times, still playing their instruments loudly. After the people yelled at the top of their voices, the city walls collapsed.



## Key Points, cont.

**6** We know so much about the *shofar* because of its 3,000 plus years of uninterrupted use, and the numerous sources, both written and oral, that illuminate its meaning, use, and significance for the Jewish people.<sup>5</sup> (TE p. 47)

**7** Although the Hebrews used a ram's horn, in the story of Jericho, they also used a trumpet made from silver called the *Hass-rah*, which God told Moses to make when he was on Mt. Sinai. This instrument likely resembled the Mesopotamian or Egyptian

trumpet.<sup>6</sup> (SE p. 10, TE p. 14)

**8** Anthropologists, archaeologists, and historians have pieced together the start of civilization between 10,000–2,000 BCE. As the last ice age came to an end, a change occurred in human living patterns, from hunting and gathering, to farming and the domestication of animals, and this allowed people to live in fixed housing, forming communities which eventually grew to become towns and cities. What is a “civilization”? A civilization has many characteristics including political, social, economic, cultural, and religious

## Teaching Tip

When discussing religion or belief systems with students, be careful that you are not promoting, denying, or passing judgement. Rather, you are placing these beliefs in a historical context so that students have a knowledge of them and their role in human history.

elements. These new communities had a social structure that placed a king or ruler at the top, religious and military elites in the middle, and farmers and artisans in the lower orders. In addition, a bureaucracy developed which enabled the growth of armies, to provide security or wage war. Systemic agriculture was introduced as a way of producing food, and artisans and craftspeople began to specialize and make pottery, textiles, and tools. Distinct religious beliefs emerged, with gods becoming crucial in people's lives. Systems of writing were developed, using shapes and letters as a way for kings, priests, artisans, and merchants to keep records. It also enabled people to write down music. Finally, the appearance of bronze from as early as 3,500 BCE resulted in changes in technology, including advanced metalworking.<sup>7</sup> The earliest civilizations were located in Egypt, Mesopotamia, India, Peru, and China. From this time onwards trumpets of many types (made of both natural materials and metals) were in use. How do we know? First, ancient texts such as *The Epic of Gilgamesh*<sup>8</sup>, the Old Testament<sup>9</sup>, and the *Rig Veda*<sup>10</sup> mention the use of trumpets in ancient civilizations. Second, images of trumpets have been found on ancient artwork, stone carvings, and pottery.<sup>11</sup> Finally, many ancient trumpets have survived to this day and are housed in museums across the globe.<sup>12</sup>

## Summary

In Chapter 4, students will learn how Ragnar was taught the various parts of the *shofar* call—its meaning and significance—by one of the six priests at the Battle of Jericho. They will also learn about the many uses of the *shofar* throughout history, how the sounds of the *shofar* were passed down from generation to generation over thousands of years, and how we know what we know about the *shofar* calls. They will learn to play the different parts of the *shofar* call, as well as continuing their regular musical exercises in the Practice Cave.

## Objectives

### Students will:

- **Discover** the various meanings of the parts of the *shofar* call
- **Think about** the various uses of the *shofar* and its importance to the Hebrew people
- **Contemplate** how the *shofar* call has been passed on over three millennia and whether it has changed over time
- **Practice** more advanced long note, articulation, and harmonic note exercises
- **Learn** how to play each part of the *shofar* call—individually, and in sequence—demonstrating expressive intent

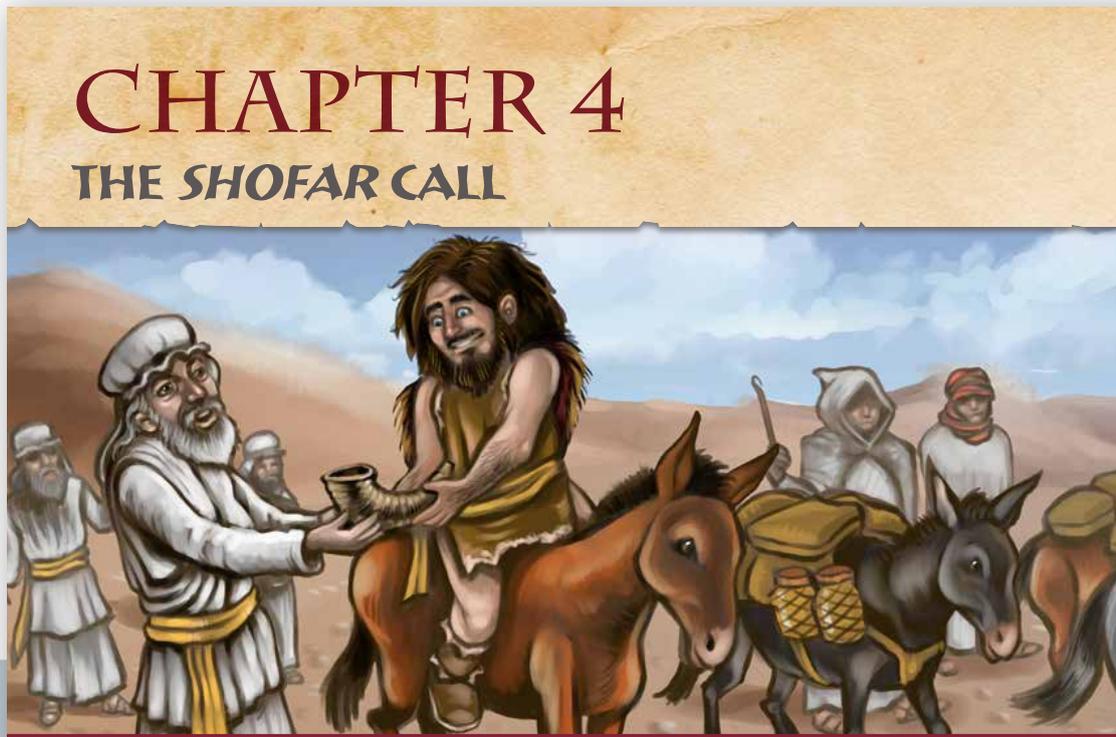
## Learning Activities

After reading or listening online to **Chapter 4: The Shofar Call**, explain some of the meanings of each part of the *shofar* call (Key Point No. 1) and then ask the following questions:

**Q.** How do you think hearing the sound of the *shofar* made the Hebrews feel after the battle was over?

**A.** Thankful; grateful; joyous; happy; protected; safe.

Ask students to read **Reality Check!** (SE p. 33) and ask them to list some of the ways the Hebrews used the *shofar*.



AFTER CONQUERING THE CITY of Jericho, the Hebrews came together to thank God and to worship in a religious ceremony. One of the six priests played four blasts on his *shofar*. They believed that the sound was a call from heaven and that it made everyone turn their hearts to God. Everyone was full of joy for the blessing of starting a new life together.

The priests thanked Ragnar for his help and asked if there was anything he needed in return. Ragnar said that he would like to learn the *shofar* call he had heard in the ceremony, so the head priest took Ragnar aside and explained its four parts, along with their names and meanings. The first part is a “blast” called *Tekiah*. It starts on a low note, then moves to a higher note, and holds for a few seconds. The second part is a “broken” sound called *Shevarim*. This call moves quickly from a low note to a high note three times in a row. The third part is an “alarm” called *Teruah*. To make this call you play twelve short notes quickly in a row. The last part is a “great blast” called *Tekiah Gedolah*. This part is played in the same way as *Tekiah*, but the last note is held for much longer.

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**A.** For battle, religious ceremony, warning, to call people together, show joy or sadness.

Explain that the *shofar* call was not written down until a thousand years after the Battle of Jericho, but that it is still being played in synagogues around the world to this day.

**Q.** How is it that the Jewish people still know how to play the *shofar* call today?

**A.** It has been passed down from person to person (in the way the priest taught Ragnar in the story) and from generation to generation.

Explain that this way of learning music is called aural tradition (learning by listening), as opposed to oral tradition (learning through spoken language), and that even today, no one actually learns the *shofar* call by looking at music.

**Q.** Do you think the *shofar* call sounds exactly the same as it did 3,000 years ago? Why or why not?

**A.** There is no right answer here. To help students think about it, ask them to consider the game “telephone,” in which someone passes around a story, from one person to the next, until it ends up back

When they had finished, the head priest was so impressed with Ragnar's playing that he gave him a *shofar* and sent him with a group of traders heading to Egypt. The priest thought that they might need someone there with Ragnar's trumpet-playing abilities.

2

## REALITY CHECK! What the Experts Say About USES OF THE SHOFAR

3

Sacred texts, including the Old Testament, the Talmud, and the Dead Sea Scrolls, describe the many uses of the *shofar*. Its main purpose was for use in Jewish religious ceremonies but it was also blown during battle to signal, gather and rally people to fight. It was used to warn of impending danger, it sounded when punishments were being pronounced, at times of joy, and to show sadness at funerals. Today, the *shofar* is blown mainly on Jewish holy days, such as *Rosh Hashanah* and *Yom Kippur*.



### DID YOU KNOW?

A *shofar* is made from an animal horn, but not just any animal horn. It is typically a ram's horn

but can be from any animal that is

4

permitted by Jewish law. Animal horns are made of the same material as hoofs and fingernails, and the inside can be cleaned out to make them hollow. The tips of the narrow end of the horn are cut off to allow them to be blown. Deer antlers cannot be used as a *shofar* as they are solid and cannot be hollowed out.



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at the source where it can be compared to the original. It is almost certain that the *shofar* call doesn't sound exactly the same as it did 3,000 years ago, which is borne out by the fact that it can sound different in synagogues in neighboring communities,<sup>1</sup> but because of its uninterrupted use, and because so much has been written about it throughout history, we can guess that it sounds very similar.<sup>2</sup>

Q. Where and with whom did the priest send Ragnar after he gave him a *shofar*?

A. To Egypt with a group of traders

Explain that the Book of Exodus in the Old Testament tells the story of the Israelites' escape from slavery in Egypt to the "promised land," 40 years before the Battle of Jericho, so the Israelites (the Hebrew people) would have known a lot about Egypt.<sup>3</sup> (See Key Point No. 2)

Ask students to read **Did You Know?** (SE p. 33) and use part of the story of Exodus (Key Point No. 4, TE p. 48) to explain why the *shofar* cannot be made from the horns of a cow or similar animals, such as buffalo or bison. For this reason, Ragnar's Bison horn couldn't be called a *shofar*!

## Key Points

1

The four parts of the *shofar* call mean various things, depending on the context in which they are used. For example, during Rosh Hashanah (Jewish New Year festival) they are used to call one's attention to God, to reflect on one's faults, to reaffirm spiritual goals, and to repent and make amends for wrongs. In the context of a battle (such as the battle of Jericho), the following meanings could apply:

**Tekiah:** A call to attention or to assembly; it can also mean to thrust (lunge with a sword) or blow (a gust of wind)

**Shevarim:** These broken blasts can represent shrill or wailing cries. They can also be a signal to break camp in preparation for battle.

**Teruah:** Short blasts or shouts which may represent a battle cry or an alarm.

**Tekiah Gedolah:** A long (great) blast, representing an appeal to God for repentance and to make amends.<sup>4</sup>

Although the sacred texts outlined in **Reality Check!** (SE p. 33) contain various descriptions of the *shofar* calls, it wasn't until the 13th century that the *shofar* call appeared in musical notation. Nevertheless, as David Wulstan states, "the *shofar* call can be traced from Biblical to modern times with a reasonable degree of certainty"<sup>5</sup> making it by far the most ancient trumpet music known to man, with an uninterrupted tradition of over 3,000 years.

2

One of the most important characteristics of early civilization was trade. (See **Reality Check!** SE p. 31, TE p. 45) The Israelites would have obtained and exchanged goods such as textiles, pottery, metals and grain with each other and with foreigners who traveled from all over the Ancient Near East. This area included Mesopotamia, Asia Minor, Egypt, Syria, and the Kingdoms of Israel and Judah, or modern-day Turkey, Syria, Jordan, Lebanon, Israel, Iraq, Kuwait, parts of Iran, northern Saudi Arabia and northern Egypt.<sup>6</sup> It is quite possible that metalwork was exchanged, including weapons and even trumpets. The Israelites were

probably familiar with the trumpet because of their years spent enslaved in Egypt, a kingdom that used metal trumpets for ceremonial and military purposes. See also Key Point No. 7 on p.45.

3 These ancient texts shed a great deal of light on both the use and the significance of trumpets in the Neolithic period in general. For example, in Psalms 98.6: “Just as earthly kings have horns and shofarot blown to celebrate the anniversary of their coronation, so God wants the shofar blown on the anniversary of the Creation.” Or in Amos 3:6: “The blowing of a horn causes cities to tremble, so the shofar will make us tremble and fear our Creator.”<sup>7</sup>

4 As scholar Jeremy Montagu states, “The horns of a cow or a bull, and those of any other members of that family, such as buffaloes and wild oxen, are prohibited.”<sup>8</sup> He adds that this is because of the episode of the Golden Calf (described in Exodus 32): While Moses was on Mount Sinai receiving God’s commandments, the Israelites became impatient and created an Egyptian Bull god, “The Golden Calf,” which they began to worship with great fervor. God heard them and told Moses to go down to confront them, which was when Moses became angry and broke the first set of Tablets of the Law.<sup>9</sup>

# CHAPTER 4 PRACTICE CAVE EXERCISES!

**ARE YOU A MUSIC READER?**

Follow along with music notation for these exercises on page 78.

## LONG NOTE EXERCISES

- Hold a lower harmonic note for **8-10 seconds**
- Hold a higher harmonic note for **8-10 seconds**

## HARMONIC NOTE EXERCISES

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

## ARTICULATION EXERCISES

1 <sup>a.</sup> <sup>b.</sup> 2 <sup>a.</sup> <sup>b.</sup>

## MAKE MUSIC!

## IMPROVISE

- A *shofar* battle call using two harmonic notes
- Music to celebrate a victory using two harmonic notes

## PLAY ALONG

- **Tekiah:** Start on a low note, move to a higher note, and hold for a few seconds: “*DaWeeeeeee*”
- **Shevarim:** Move quickly from a low note to a high note three times in a row: “*DaWee, DaWee, DaWeeeeeee*”
- **Teruah:** Play twelve short notes quickly in a row (think three groups of four notes): “*DaDaDaDa DaDaDaDa DaDaDaDa*”
- **Tekiah Gedolah:** Play like *Tekiah*, but hold the higher note for as long as you can: “*DaWeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeee*”

- Play the entire *shofar* call:  
*Tekiah, Shevarim, Teruah, Tekia Gedolah*

Sound files for this page are available at [www.practicecave.com](http://www.practicecave.com)

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## Practice Cave

Performing the *shofar* call is an excellent goal for an 8-10-week general music unit. It encompasses the fundamentals of brass playing, and its historical significance is a great reference point for understanding the timeline of lip-blown instruments. Additionally, learning and rehearsing the *shofar* call helps students develop a sense of musical structure and challenges their memory.

Always take a few minutes to review **Get Ready, Get Set, Play!** (SE p.18-19, TE p. 28-29) before working on exercises, and consider breaking students up into three “practice cave stations,” (TE p. 37) where they can work together to improve their skills in each area of technique.

### Long Note Exercise

Remind students that holding a long note requires taking a full breath and blowing the air slowly. Challenge students to hold

higher and lower notes than they are accustomed to. Review some of the variables associated with navigating the harmonic series (TE p. 38) and encourage students to try different strategies. For instance, to hold a higher note, encourage students to form a smaller aperture, use the vowel “EEE,” while blowing with a faster airstream.

### Harmonic Note Exercises

These exercises introduce the technique of alternating (moving up and down) between two harmonic pitches. The following approaches are both very useful for different reasons. The first develops the use of articulation and tongue position, and the second helps to develop and refine students’ pitch and interval awareness. Alternate between the following two activities as you work through the exercises:

# PRACTICE CAVE CHAPTER 4

The *Shofar* call

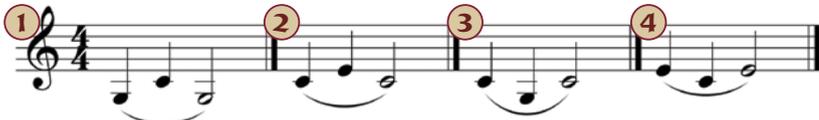
## EXERCISES!

### LONG NOTE EXERCISES

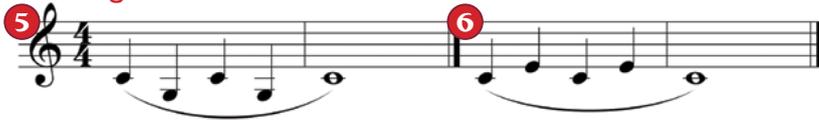
- Hold a lower harmonic note for **8-10 seconds**
- Hold a higher harmonic note for **8-10 seconds**



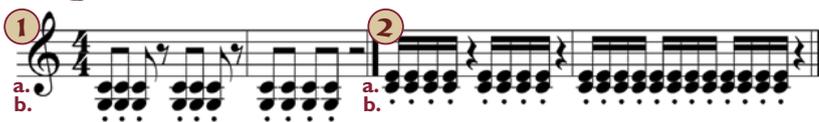
### HARMONIC NOTE EXERCISES



### Challenge!



### ARTICULATION EXERCISES



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1. Sing exercise no. 1 (by yourself, or with the online sound file) using vowels “TAAH-EEE-AAAAAH,” and ask students to repeat it, singing along with you. Then play on the mouthpiece or trumpet and repeat until students are playing with reasonable accuracy.

2. Sing exercise no. 1 using solfège syllables (TE p. 50), “Sol-Do-Sol,” and ask students to repeat it, singing along with you. Then play on the mouthpiece or trumpet and repeat...(as above)

### Articulation Exercises

These exercises are meant to prepare students to play the *Teruah* part of the *shofar* call. It is helpful to first count the notes in groups of numbers. For example, for exercise No. 1, have students count, “one, two, three, (pause), one, two, three, (pause), one, two, three, four, (pause).” Then have them do the same either singing with articulations “Tat, Tat, Tat, (pause), Tat, Tat, Tat, (pause), Tat, Tat, Tat, Tat,” or by blowing air through a well-formed embouchure. Notice

the staccato marks on each note. This is a good opportunity to challenge students to keep the air moving while the tongue starts and stops individual notes. In general, wind players don’t stop the air for each note using the respiratory system, but rather, they keep forward movement of the airstream through phrases even when the notes are to be played in a detached manner. Keeping the air moving while the tongue articulates successive notes (TE p. 32-33) connects the sounds together musically while developing fluid and efficient technique.

### Improvise

Discuss the prompts as they relate to Ragnar’s story and give students some time to improvise together. After a minute or so, ask volunteers to share their ideas and keep track of examples that demonstrate compelling expressive intent (TE p. 49) for possible use in performance.

## Teaching Tips: Expressive Intent

Historical context for the musical examples in *Around the World in Twenty-One Trumpets* is provided to help students make connections to their own thoughts, ideas, feelings, and emotions. This inspires creative development and helps them to perform with purpose; that is, to perform with expressive intent. When working on music in the **Practice Cave**, encourage students to think about whether or not their performance is effective in conveying the purpose of each piece, and ask them to think about ways in which they can improve. Point out that if they can’t convince themselves, or each other, of the intent of the music, then the audience won’t be convinced either. Help them to appreciate how fascinating and mysterious it is that when a feeling or purpose is expressed while performing, someone listening can sense that feeling or purpose as well. When given enough opportunity, students can understand and apply very sophisticated concepts.

**Never underestimate children!**

## Teaching Tips: Solfège

As students gain confidence in sound production, start encouraging them to find or copy specific harmonic notes and intervals. One strategy is to have students listen and repeat, playing on the mouthpiece. Another is to have them vocalize (sing) with syllables such as “TAA” or “DAA,” changing the vowel from “AA” (low), to “EE” (high) as suggested in **Chapter 3** (TE p. 38-39). You may find however that a system like solfège can be even more effective with regards to the development of pitch and interval accuracy. Try having students sing the exercises and **Make Music!** pieces using the following solfège syllables before playing them on the mouthpiece or trumpet:

<p>"Sol" (as in "bowl")</p>	<p>"Do" (as in "dough")</p>
<p>"Mi" (as in "bee")</p>	<p>"Sol"</p>
<p>"Si" or "Ti" (as in "bee")</p>	<p>"Do"</p>

## MAKE MUSIC!

### IMPROVISE

- A *shofar* battle call using two harmonic notes
- Music to celebrate a victory using two harmonic notes

### PLAY ALONG

- *Tekiah*: “*VaWeeeeeeee*”

- *Shevarim*: “*VaWee, VaWee, VaWeeeeeeee*”

- *Teruah*: “*VaVaVaVa VaVaVaVa VaVaVaVaaa*”

- *Tekiah Gedolah*: “*VaWeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeee*”

- Play the entire *shofar* call: *Tekiah, Shevarim, Teruah, Tekia Gedolah*

### Play Along

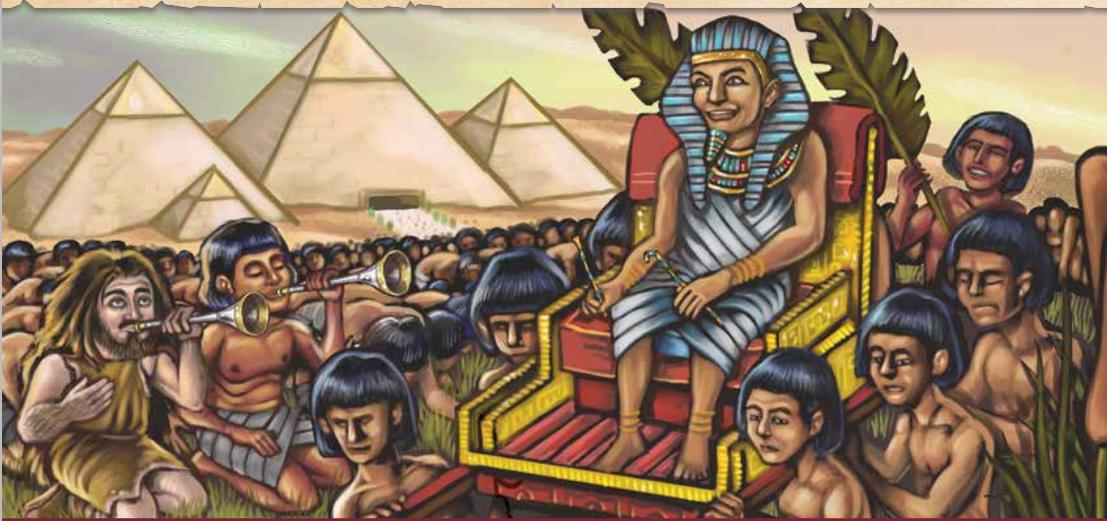
Practice each part of the *shofar* call separately before attempting to combine them. Remember that at this stage, it is entirely acceptable for students to play “wrong notes.” What is important is that they are moving from a lower harmonic note to a higher one, and playing with expressive intent.

Playing *Tekiah*, *Shevarim*, and *Tekiah Gedolah* requires students to learn how to play pick-up notes. First demonstrate with the air alone to focus on the coordination of the breath: Count aloud “One, Two, Three”—inhaling with “OH” either in anticipation of beat 4, or quickly on beat 4, releasing the air on the second eighth note—“OH-TA-EEEEEE,” and ask students to repeat. Try the same using solfège: “OH-Sol-Do...” If students are having difficulty starting the pick-up note on a lower harmonic, encourage them to start the pickup note with slower air.

Before practicing *Teruah*, explain that it can be played with either nine or twelve notes. First ask students to think about how they might keep track of playing nine notes. Some students will try by counting to nine while playing, which isn’t likely to succeed. Ask them what number nine is divisible by and have them count three groups of three notes: “One, two, three, One, two, three, One two three.” Repeat the same thought process with 12 notes, and then practice counting in four groups of three, or three groups of four (as indicated on SE p. 34). Repeat with air alone, and then on the trumpet. Ask students to listen to how the performance sounds. Are they playing well together? Are they starting and stopping exactly at the same time? Check to see if they are keeping the air moving while articulating, and most importantly, motivate them to play the call with its expressive intent; that is, like an alarm or battle cry, with a sense of urgency!

# CHAPTER 5

## THE PHARAOH'S TRUMPETERS



### KEY WORDS

#### CONICAL

Funnel-shaped or cone-shaped. A conical instrument opens gradually from the mouthpiece to the bell flare.

#### BORE

The internal diameter (width) of tubing: the hole in the middle of the instrument through which the air passes.

#### BELL FLARE

The shape of the open end of a brass instrument: helps to amplify sound and make notes from the harmonic series clear.

ON THE WAY TO EGYPT, Ragnar heard stories about armies with amazing weapons, chariots drawn by horses, and a king they called a pharaoh. His travel companions had donkeys, loaded up with large bags full of pottery, which they were going to trade for grain that grew along the banks of the mighty Nile river. Ragnar played his shofar for them, and they were astounded. One of them told Ragnar about a trumpet in Egypt made of metal called the *šnb* (sne-heb) which shines like the sun and sounds like the braying of a donkey.



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## Summary

In **Chapter 5**, students will travel with Ragnar to Egypt and learn about Egyptian civilization and the Egyptian trumpet, the *šnb*. They will learn about the physical and musical characteristics of the *šnb*, why it can play more “harmonic” notes than the instruments Ragnar had previously played, and its symbolic significance. In the **Practice Cave**, students will advance their playing by practicing moving between three harmonic notes, playing triplet march and fanfare figures, and song-like music.

## Objectives

### Students will:

- **Consider** the characteristics of Ancient Egypt, including its geography, trade, and social organization.
- **Learn** about the physical and musical characteristics of the Egyptian *šnb* and think about why it could produce more notes than Ragnar's previous trumpets
- **Contemplate** the significance of the *šnb* for the ancient Egyptians after learning its uses, importance, and symbolism
- **Practice** moving between three harmonic notes, playing triplet march and fanfare figures, and song-like music

## Learning Activities

After reading or listening online to **Chapter 5: The Pharaoh's Trumpeters**, show students a map of the Ancient Near East (North Africa and the Modern Middle East - see **Key Point** No. 1). Ask them to locate the city of Jericho and the River Nile in Egypt. Ask students to roughly estimate (confirm using an Internet map search) the distance between the two. Discuss how long it might have taken for Ragnar and his friends to make this journey.

**Q.** What were the things that Ragnar heard or saw that might have been new to him?

**A.** Stories about armies and chariots; the Nile river (likely the largest, longest river that Ragnar had encountered to date); boats; the pyramids; the pharaoh; large crowds; farming.

Discuss key words **conical**, **bore**, and **bell flare**, using the natural trumpet to illustrate each feature, and ask the following:

**Q.** What were some of the characteristics of the *šnb* that were new to Ragnar? Why did one of the traders say that the *šnb* shines like the sun? What other instruments had Ragnar played previously that were conical in shape?

**A.** Whereas the animal horns, sticks, and bones were uneven in shape and had a dull surface, the *šnb* was longer, with a perfect conical bore and a wide bell flare. It had a shiny metal surface, which made it reflect light. Ragnar had seen metal weapons in Jericho, but the Egyptian *šnb* was the first metal lip-blown instrument he had encountered. Both the Bison horn and the *Shofar* are also somewhat conical in shape.

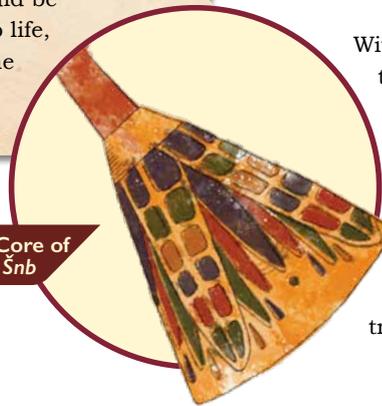
# Key Points

- 1 Egypt, like Mesopotamia, was a river valley civilization. The banks of the river, which were very fertile, supported the growing of grain, making Egypt very prosperous. The Nile, the longest river in the world, flows from the center of Africa northward. Egypt's most important cities were located in Lower Egypt, near the river's delta, about 100 miles from the Mediterranean Sea, and Upper Egypt, which was further south. The river was the quickest way to travel and transport goods.
- 2 The technology of fabricating metal trumpets likely transferred from Mesopotamia, the earliest center of bronze production, to Egypt and other parts of the ancient world.<sup>1</sup> It is possible that Ragnar had already come into contact with the *hassrah* (metal trumpet) during his time with the Israelites (see **Key Point** No. 7 on TE pg. 45), but there is no mention of the *hassrah* in the story of the battle of Jericho, and its use was associated primarily with temple worship. Greek writer and philosopher Plutarch described the sound of the *šnb* as the braying of a donkey, suggesting an unmelodious, harsh sound.<sup>2</sup>
- 3 The length, conicity, internal bore, bell flare, and mouthpiece (or lack thereof) are all factors affecting the number of notes (partials) that can be played on a lip-blown instrument. Hans Hickmann suggests that the Egyptian trumpets could only play two partials (sounding far from "harmonic"), while Percival Kirby and Jeremy Montagu state that they can play three.<sup>3</sup> On a copy of the silver trumpet made by Dr. Peter Holmes (in the author's possession), it is possible to play four clear partials, although the intervals formed are far from "harmonic," likely due to the lack of exponential bell flare and very wide aperture at the mouth end.
- 4 This is an important theme that runs through the narrative; that Ragnar is a listener, which makes him a good learner. Musicians have to develop the ability to hear and react to many different aspects of sound in order to communicate sounds

## DID YOU KNOW?

Two ancient *šnbs* were found in Egypt in 1922, in the tomb of Egyptian pharaoh Tutankhamen. One was made of silver, the other of copper. They both had a **conical bore** and a wide **bell flare**. Both trumpets contained a decorated wooden core, or stopper. No one knows for certain what the wooden cores were used for. It is possible that they were used to protect the instruments from damage during transportation, but experts also think that they may have been important for other reasons too. Both were decorated with lotus flowers, which in Egypt were a symbol of rebirth. When the wooden core was placed in the trumpet, it would silence the sound. Then, when it was removed, the instrument would be brought back to life, speaking like the voice of a god.

Wooden Core of the Silver *Šnb*



When the travelers reached Egypt they journeyed on until they started to approach a magnificent pyramid. As they got nearer they saw thousands of excited people coming together. Ragnar became aware of a sound unlike anything he had heard before. Was it three notes? Four notes? He followed the sound, pushing his way through the crowd until he saw two men playing straight, shiny trumpets. Suddenly, disaster struck. One of the trumpeters passed out because of the overwhelming heat. One man caught the trumpeter, and another caught the trumpet. Everyone panicked! The pharaoh was about to arrive, and he expected to hear two trumpets. Ragnar stepped forward. Though he had heard the sounds for only a few minutes, he was becoming an expert at copying what he heard. Ragnar put the *šnb* to his lips and blew:

DAAAA  
Do DAAAA  
Do DRI DI DI DI DI  
DOOOOOOOOOO!!



Without skipping a beat, the other trumpeter joined Ragnar as the pharaoh's chariot approached. Everyone fell to their knees as the pharaoh passed by. For the Egyptians, the pharaoh wasn't just a king. He was a god. The sound of the *šnb* represented the pharaoh's power over his people. Ragnar had truly saved the day.

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## Learning Activities, cont.

**Q.** How did the trader describe the sound of the *šnb*?

**A.** It sounded like a braying donkey.

Ask students to imitate the sound of a donkey on their trumpets, and point out that the *šnb* had a bright and piercing sound.

**SPECIAL PROJECT #1** After discussing **Key Point** No. 1, ask students to research the impact of geography and topography (shape and features of land surfaces) on Egyptian life.

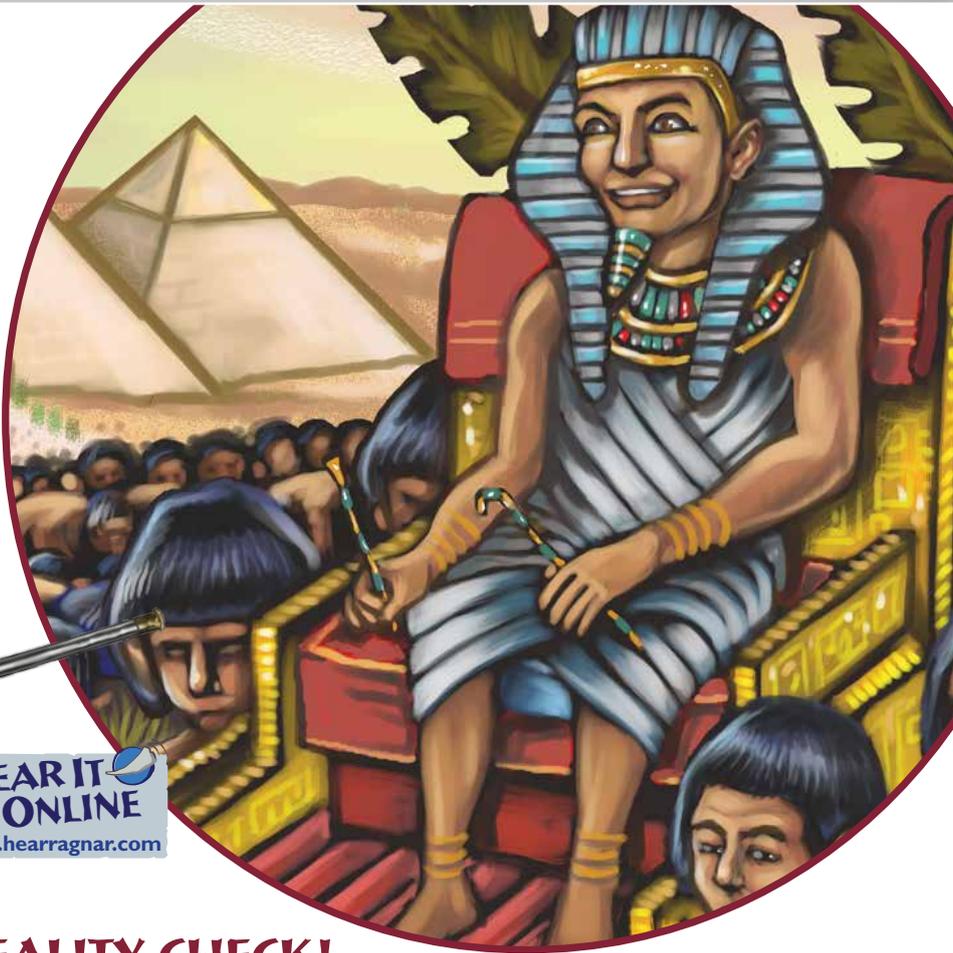
Ask students about the number of notes Ragnar heard. Have students refer back to **It's all Greek to Me** (SE p. 8-9) to discuss why the *šnb* might play more notes. Explain that the *šnb* is approx. 20 inches long, and can play three or four notes due to its length (see also **Key Point** #3).

Ask students to read **Did You Know?** (SE p. 36, TE p. 52) and then discuss how we know what we know about ancient Egypt. Explain that our knowledge comes from objects (such as tools, pots, hair pins, jewellery), written records on papyrus and

## Key Points, cont.

effectively with other musicians and the audience. Ragnar's experience with different lip-blown instruments in the Paleolithic period, as well as his experience learning the shofar call, prepared him to quickly hear and reproduce the calls he heard on the Egyptian *šnb*.

- 5 Archaeologist Howard Carter and amateur Egyptologist George Herbert discovered Tutankhamun's tomb in 1922. Two Egyptian *šnbs* were found in the tomb, dated 1324 BCE, the earliest metal trumpets in the world whose use is confirmed by iconographic evidence. One was made of silver (approx. 23 inches long), and one of copper or bronze (approx. 20 inches long), and both contained a decorated wooden core (see **Key Point** No. 6). They are currently housed in the Museum of Cairo and occasionally travel with the Tutankhamun exhibit. The two instruments were played and broadcast on BBC Radio in 1939, however; a modern mouthpiece was inserted into the trumpets which dramatically changed how the instruments sounded.<sup>4</sup> The metalworking techniques used to make the trumpets were very sophisticated: the tube of the silver trumpet was joined with a tab seam, and the copper one with a butt seam.<sup>5</sup> Both of these techniques for joining metal sheet are still in use to this day.



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## REALITY CHECK!

What the Experts Say About

## THE EGYPTIAN ŠNB

In our story, Ragnar plays the *šnb* to signal the arrival of the pharaoh. About five thousand years ago, powerful pharaohs ruled Egypt, a land in North Africa that is covered by desert. Pharaohs were believed to be living gods, who commanded great armies. Symbols and carvings have been discovered that show the use of the *šnb* for war, to rally the soldiers and give directions. In addition, the *šnb* was used for ceremonial and ritual purposes. Some experts believe that the *šnb* was used in the worship of *Osiris*, Egyptian god of the underworld and the afterlife, who judged the dead.

7

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stone in picture-writing (hieroglyphs), wall paintings, and tombs.

**Q.** What was the purpose of the decorated wooden cores (stoppers) that were found inside the trumpets?

**A.** We don't know for certain, but they could have been used to protect the trumpets or to silence the sound (see **Key Point #6**).

**SPECIAL PROJECT #2** After discussing **Key Point** No. 5, ask students to conduct research on King Tutankhamen's tomb. Ask students to think about the

following: How was it discovered? What was inside? Why is the discovery so important for historians? Should tombs be left unopened?

After reading **Reality Check** (SE p. 37, TE p. 53), ask students the following questions:

**Q.** Who were the rulers of Egypt? Why were they so powerful?

**A.** Pharaohs ruled Egypt. They were believed to be living gods who commanded great armies.

**Q.** What were some of the uses of the *šnb*?

**A.** It was used during battle - to rally soldiers and give directions. It was also used for ceremonial and ritual purposes.

**SPECIAL PROJECT #3** Discuss how ancient metalworkers joined the ends of metal sheet to form tubes (**Key Point** No. 5). Use cardstock and scissors to demonstrate how tubing could be joined together with a tab seam. (resource? Youtube?)

## Key Points, cont.

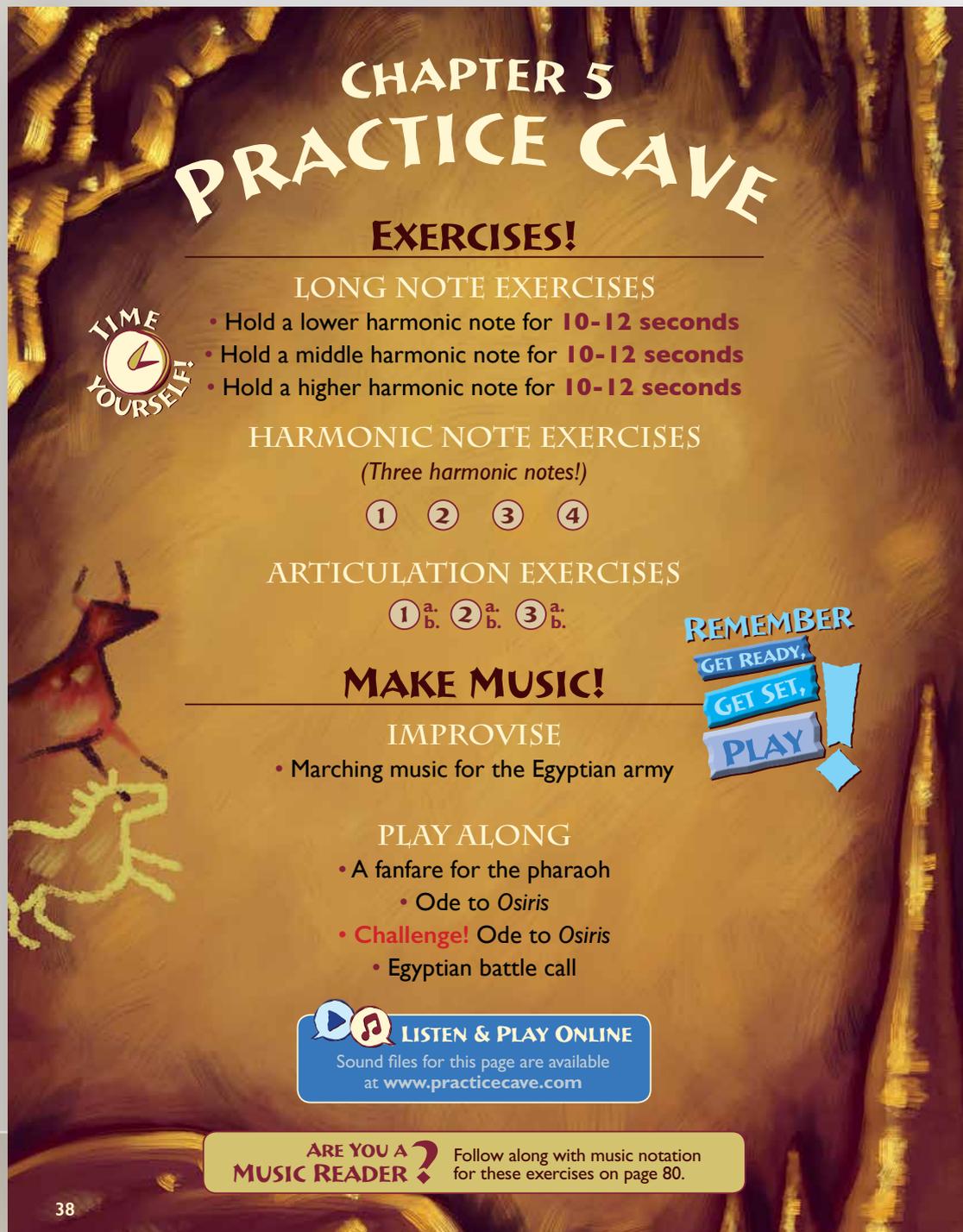
- 6 There are many theories as to the purpose of the wooden cores found inside the trumpets. It is very possible that their original function was as a mandrel used to fabricate and repair the instruments, but because the *šnb* was often depicted in a military context, many believe that the cores were used to help protect the instruments while not in use and for transportation. Iconography sometimes shows trumpeters playing a *šnb* while holding what could be a wooden core under their arm, but this could also represent two trumpets, of slightly different lengths, used to relay distinct commands. Scholars have also suggested that the cores could have been attached to a string to hang the trumpet for painting or storage, while others believe that the cores, which were painted with lotus flowers, had a more symbolic function. For example, Dr. Peter Holmes draws on the powerful symbolism of the lotus flower to suggest that the core symbolizes rebirth.<sup>6</sup> When the trumpet was not being played, the core would be hidden inside, just as the lotus disappears into the water at dusk. When the core is removed, the voice of the trumpet would sound again, just as the lotus flower reemerges every morning with the rising sun, being

## Practice Cave

Always take a few minutes to review **Get Ready, Get Set, Play!** (SE p.18-19, TE p. 28-29) before working on exercises, and consider breaking students up into three “Practice Cave Stations,” (TE p. 37) where they can work together to improve their skills in each area of technique. Before playing any exercises, it can be very useful to warm up the mechanism for pitch change by playing a siren on the mouthpiece. (TE p. 37)

### Long Note Exercises

In this chapter students will be encouraged to sustain three specific pitches, ranging anywhere from “g” below the staff to “g” in the staff. Even at this stage, some students will struggle



# CHAPTER 5 PRACTICE CAVE EXERCISES!

**TIME YOURSELF!**

### LONG NOTE EXERCISES

- Hold a lower harmonic note for **10-12 seconds**
- Hold a middle harmonic note for **10-12 seconds**
- Hold a higher harmonic note for **10-12 seconds**

### HARMONIC NOTE EXERCISES

(Three harmonic notes!)

1 2 3 4

### ARTICULATION EXERCISES

1<sup>a</sup>. 2<sup>a</sup>. 3<sup>a</sup>.

## MAKE MUSIC!

**REMEMBER!**  
GET READY,  
GET SET,  
PLAY!

### IMPROVISE

- Marching music for the Egyptian army

### PLAY ALONG

- A fanfare for the pharaoh
  - Ode to Osiris
- **Challenge!** Ode to Osiris
  - Egyptian battle call

**LISTEN & PLAY ONLINE**  
Sound files for this page are available at [www.practicecave.com](http://www.practicecave.com)

**ARE YOU A MUSIC READER?** Follow along with music notation for these exercises on page 80.

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to hear and reproduce specific pitches. It can be helpful to have them sing the pitch or play on the mouthpiece before playing on the trumpet. If students have difficulty sustaining lower pitches, ask them to play the note with an open vowel sound such as “OH” or “AH” (or larger aperture) while moving the air slowly. If they are having difficulty sustaining higher notes ask them to use a vowel sound like “EEE” (or with a smaller aperture) while moving the air rapidly. Review some of the variables associated with navigating the harmonic series (TE p. 38) and encourage students to try different strategies if they are having difficulty holding specific pitches.

### Harmonic Note Exercises

These exercises require the ability to navigate between three harmonic notes and expand the range to “g” in the staff. Some students may not be able to control the pitch accurately enough to successfully navigate between these pitches, but again, the important thing is that they are learning how to shift up and down between notes of the harmonic series while improving pitch accuracy.

Before playing exercises No. 1-4, first try singing with solfège syllables (TE p.50). For example, for No. 1, sing “Sol-Do-Mi” and encourage students to repeat.

# PRACTICE CAVE CHAPTER 5

## The Pharaoh's Trumpeters

### EXERCISES!

#### LONG NOTE EXERCISES

- Hold a lower harmonic note for **10-12 seconds**
- Hold a middle harmonic note for **10-12 seconds**
- Hold a higher harmonic note for **10-12 seconds**



#### HARMONIC NOTE EXERCISES (THREE HARMONIC NOTES!)

#### ARTICULATION EXERCISES



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To make students aware of how tongue position can help make these shifts on the trumpet, have them sing the same pitches, but now on “AH-AY-EE,” and then have them play on the trumpet.

Students may struggle with the timing of the quarter notes in exercises No. 2 and 4. Try singing the pitch while counting in 4/4 time to help connect the pitch change with the rhythm before playing on the trumpet.

Using online sound files can be very effective in the classroom because it establishes pulse and meter, enabling the instructor to model different learning strategies for students.

#### Articulation Exercises

This chapter introduces triplet-based rhythmic patterns and more lengthy legato phrases. Before playing No. 1, try first singing on the syllable “Da:”

“Dat, DatDaaaa, Dat, DatDaaaa, Dat, DatDat, DatDaaaaa”

Then try blowing with air and articulation before playing on mouthpiece or trumpet: (“Tüt” = “toot”) “Tüt, TütTooo, Tüt, TütTooo...”

In preparation for playing No. 2, teach students how to count in groups of three, either with numbers...

## Key Points, cont.

reborn to the world. By burying the trumpets in the tomb with the cores inserted, they would have been made silent until the rebirth of the king in the afterlife. This association with rebirth could also give credence to the idea that the *šnb* was used in the worship of the God of the afterlife, Osiris. (see Key Point No. 7)

- 7 Many brass scholars, including the late 18th century pedagogue/historian Johann Altenburg (*Trumpeters’ and Kettle-drummers’ Art*), suggest that the trumpet was associated with the Egyptian God Osiris, and claim that Osiris invented the trumpet.<sup>7</sup> There are only a few examples of iconography that support this idea,<sup>8</sup> but it seems to originate primarily from a popular belief as described by Eustathius of Thessalonica in his 12th century commentary on Homer’s *The Iliad*.<sup>9</sup> Osiris was the God of the afterlife who judged the dead in Egyptian mythology, which has parallels in the Judeo-Christian tradition of the trumpet being used in end days, to judge the living and the dead.<sup>10</sup>

“One, Two, Three, One, Two, Three...”

...or with the word “triplet:”

“Tri-pl-et, Tri-pl-et, Tri-pl-et...”

Then blow the rhythmic pattern of No. 2 with air and articulation before playing on the mouthpiece or the trumpet:

“Tooo, TütTütTüt, Tooo, TütTütTüt, TütTütTüt, Tooo,”

Have students sing no. 3 on “Da,” encouraging them to keep the sound moving through the notes before trying on the mouthpiece or the trumpet:

“DaDaDaaaa, DaDaDaaaa, DaDaDaDaDaaaa”

## Teaching Tip

### Differentiation

At this point in the course, you will find that students' skill level may vary dramatically with regards to sound production, pitch matching, and articulation. There are many ways to involve and challenge students with less confidence and skill as well as those who are excelling.

For instance, in playing the "Egyptian Battle Call," try dividing students up into 4 groups: the first group to play a rhythmic beat on hand drums, the second to play a rhythmic drone on G and C below the staff, the third to play the battle call as written, and the fourth to play the same battle call one harmonic higher. Use the "Ode to Osiris," as a prelude played by two more advanced students, and add a narrative describing the lead up to a battle. Remember, Osiris is the Egyptian God of the afterlife who judges the dead! Try starting the Egyptian battle call arrangement very softly, as if coming from far away, and then louder and louder until the Egyptian army is at your doorstep! Finish it off with the fanfare for the pharaoh to inspire ultimate fear in the enemy. For more ideas, see **BfB in Performance**

 **LISTEN & PLAY ONLINE**  
Sound files for this chapter are available at [www.practicecave.com](http://www.practicecave.com)

## MAKE MUSIC!

### IMPROVISE

- Marching music for the Egyptian army

### PLAY ALONG

- A fanfare for the pharaoh



- Ode to Osiris



- **Challenge!** Ode to Osiris



- Egyptian battle call



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## Practice Cave

### Improvise

In discussing the prompt to improvise marching music, mention that a barrel shaped drum was often depicted alongside the trumpet in Egyptian iconography, and that this is possibly the earliest evidence of trumpets being used with drums. Ask a few students to improvise a consistent marching beat on classroom hand drums while alternating rhythmic improvisations with students on the trumpets, in the form of a call-and-response. Play short rhythmic patterns in 8 beat cycles, having students repeat. After they become comfortable repeating in real time, encouraging students to take turns improvising, again

in 8 beat cycles, with the rest of the group repeating. This is a good way to allow students a chance to improvise in real time during a performance.

### Play Along

In preparation for playing "A fanfare for the pharaoh," practice counting in groups of three beats, possibly with movement, like side to side, or by clapping, on the first of every three beats. Consider playing a recording of a waltz to help students connect to the idea of counting in 3/4 feeling music in 3/4 time. Sing first with solfège to help students identify three distinct pitches:

"Do, Sol, Do---, Do, Sol, Do---, Mi, MiMi---, MiMiMiDo---"

"Ode to Osiris" offers another opportunity for students to develop legato, song-like playing. Try singing as follows to focus on tongue position and legato tonguing:

"DoDoDough, DaDaDaaa, Dough, Dough, Daaa, Dough, Daaa, Diii, DaDa, Diiiiiii...."

For the "Egyptian Battle Call," again, to focus on pitch matching, try with solfège:

"Do, DoDo, SolDo---, Do, DoDo, SolDo---, Do, DoDo, DoDo, DoDo, MiSol...."

Or try with air and embouchure to coordinate the articulation before playing on mouthpiece or trumpet:

"Tüt, TütTüt, TütToooo, etc.."