

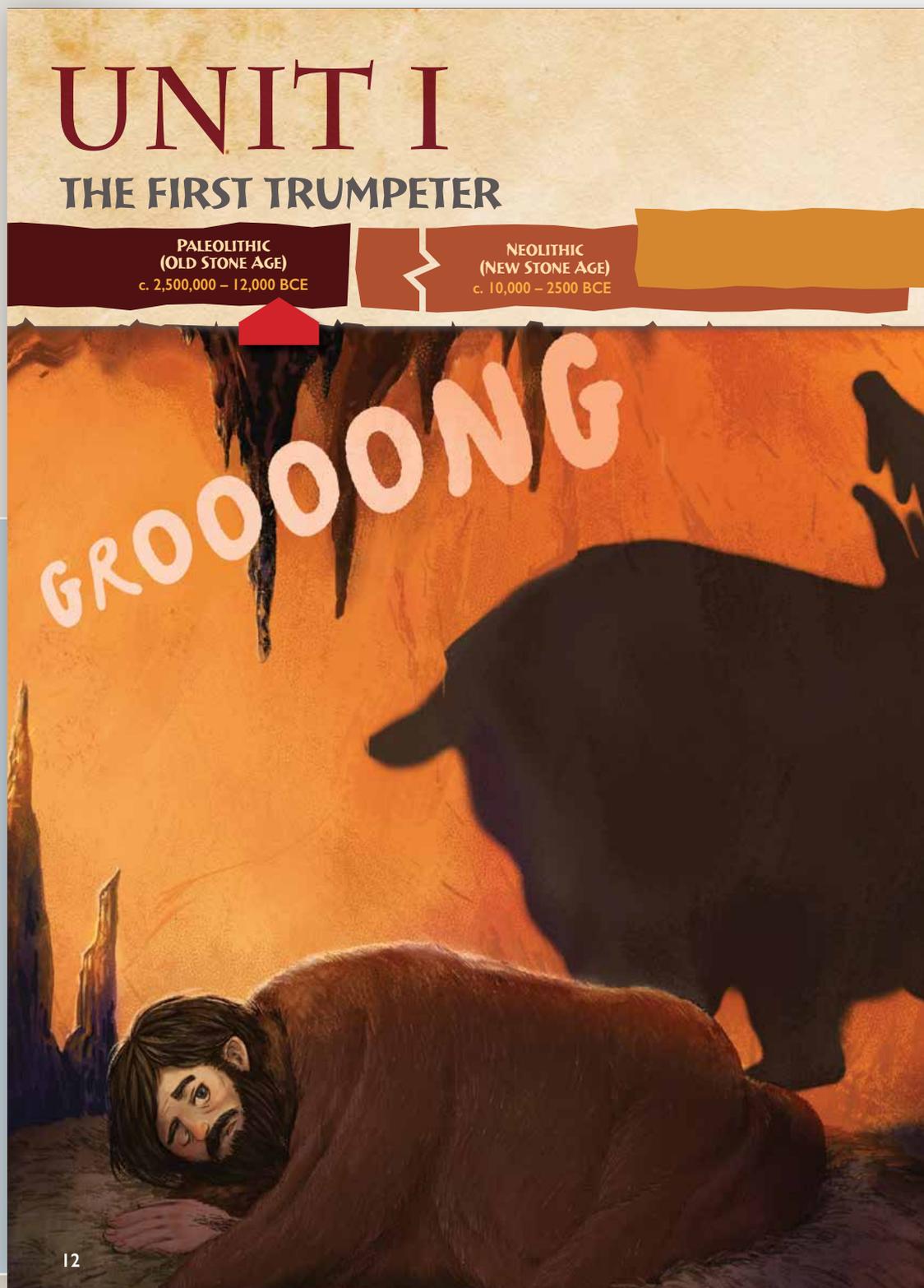
Summary

At the start of Unit I, students will learn how Ragnar first discovered that he could make lip-blown sounds and comprehend the possible impact of these sounds on hearers. Students will consider other prehistoric sounds and objects that might have been used for sound production, and produce lip-blown sounds of their own. They will also explore the question, “who was the ‘first trumpeter?’”

Objectives

Students will:

- **Learn** about possible methods and examples of sound production in pre-historic times
- **Identify** naturally occurring objects which might have been used for sound production
- **Understand** the nature of lip-blown instruments; their characteristics and how they work
- **Produce** sounds using a variety of lip-blown objects
- **Contemplate** the impact of lip-blown sounds on hearers (both animal and human) in prehistoric times
- **Consider** other possible uses for lip-blown instruments across the globe



Learning Activities

Students should read, or listen online (www.hearragnar.com), to **UNIT I: The First Trumpeter** and answer the following question:

Q. What kinds of sounds did prehistoric people hear in daily life? **A.** Sounds of nature such as birds and animals, wind, rain, thunder, insects, etc.

Now, ask students to imagine a place where they could only hear the sounds of nature. Draw attention to the absence of

modern sounds such as bells, the hum of electricity, machines, ring tones, televisions, cars and sirens. Ask students (if they have not already mentioned it), “what about talking, or human sounds?” Invite students to make sounds with their voice, tongue, and lips that they think prehistoric people may have used to communicate (see p.15, **Reality Check!**). Make sure that lip vibration is one of them, pointing out that blowing raspberries is one of the first sounds that babies make.

KEY WORD

RESONATE

To ring or vibrate with a full and deep sound.

BRONZE AGE
c. 3500–500 BCE

IRON AGE
c. 1000 BCE–CE 50

IT ALL STARTED with a strange, spine-chilling
GROOOONG!

One day, Ragnar was sifting through old animal bones that he kept in the cave. Bones were great for making lots of things, including hooks to catch fish. He picked up a hollow leg bone that once belonged to a fierce bear. Ragnar blew some dust out of it, making a long whoooooosh sound. With the bone still up to his mouth, he blew again—whoooooosh! He grunted through the bone, then he sang, and he yelled. Ragnar’s voice certainly sounded peculiar. Then he buzzed his lips into the bone. This time, it made a strange, ghostly noise:

HEAR IT
ONLINE
www.hearragnar.com

GROOOONG!

Ragnar leapt backwards, dropping the bone in fright. Keeping his distance, he looked at it carefully. His fingers were still tingling from the vibration he’d felt. Was it breathing? Why did it make such a strange noise? Ragnar watched the bone for a few minutes. It didn’t move. He picked it up cautiously, put it to his mouth, and blew again. This time, nothing happened. The ghostly sound had disappeared. Where did it go? He picked up another bone and blew the dust out of it—whoooooosh! He blew harder—whoooooosh! It made a sound like the wind blowing through the trees in winter, but it didn’t make the ghostly noise he had heard earlier.

13

Key Points

- 1 The fossil record suggests that our ancestors had developed the anatomy necessary for human speech by around 50,000 BCE. As experts believe that lip vibration was probably one of the basic building blocks of speech, it is quite possible that our prehistoric ancestors stumbled by chance upon the capacity of objects such as bones, shells, and mammal horn to produce lip-vibrated sounds.⁴
- 2 This sudden resonance—a sound very foreign to Paleolithic ears—would probably have startled those (both humans and animals) who heard it.
- 3 If Ragnar blew on a short object, such as an animal bone, it would have probably produced only a single note, so unless he buzzed at exactly the right pitch, it would not have resonated. Additionally, as the end he blew into was unlikely to have had a smooth and even surface, he would have found it hard to seal it with his lips. These factors would have made it unlikely that he would have been able to make the bone resonate twice in a row without some luck.

Teaching Tips

A bone trumpet can be hard to find or make, and if not treated properly can be unsafe to play. If you do not have a bone trumpet, try a mammal horn or a conch shell with a blowing end that can be sterilized between uses. BfB instruments designed for the classroom can be purchased at www.brassforbeginners.com.

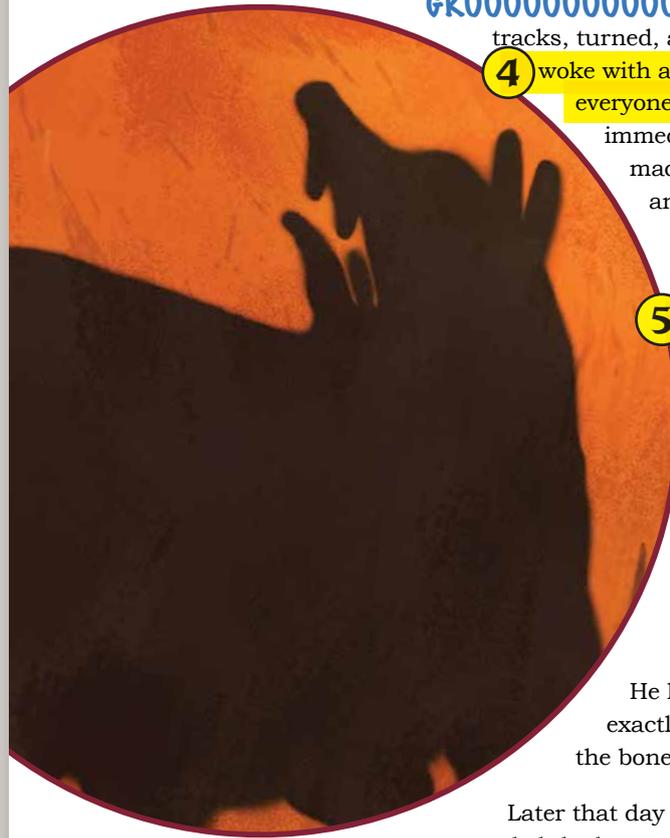
BfB Bones™
BfB Tubes™
BfB Horns™

Act out for the students Ragnar’s interaction with a bone trumpet or other simple trumpet (see **Teaching Tips**) using these sounds, eventually making the bone resonate with lip vibration. Point out that this sound would have been very different from the sounds prehistoric people heard in nature.

Review the key word **resonate** and relate it to vocalization. Invite students to sing different vowels to explore the resonant potential of their voices: “HMMMMM, AHHHHH, OHHHHH, EEEEEEE”

Key Points, cont.

- 4 Prehistoric people (like all humans and animals) would have been sensitive to sounds that might signal danger, such as those of a predator or an enemy. In Ragnar's dream, the sound of the bone trumpet scared away a dangerous animal, keeping the little boy safe. This taught Ragnar how useful the sound could be, and encouraged him to try blowing the bone trumpet until he could make it sound consistently.
- 5 Ragnar used his skills as a toolmaker to shape the end of the bone so that it was smooth, helping it to seal better with his lips thereby making it easier to sound.
- 6 Ragnar wanted to show his friends his new trumpet, and quickly realised that being able to play it was a special ability. Some in his group might have wanted to try, but would have likely failed without some beginner's luck.
- 7 In many primitive cultures, only tribal elders, shamans and priests were allowed to play lip-blown instruments.⁵ Ragnar's friends may have believed that he possessed special powers.



That night, Ragnar fell asleep near the fire thinking about the eerie sound that had come out of the bone. As he drifted in and out of sleep, shadows darted up and down the cave walls. Then he heard something rustling. Out of the corner of his eye, Ragnar spied a large bear creeping into the cave. The bear was moving slowly towards a little boy who was sleeping with his family. Ragnar froze with fear. He didn't know what to do. But suddenly, he heard that ghostly sound ring out:

GROOOOOOOOOOOONG! The bear stopped in its tracks, turned, and ran out of the cave. Ragnar woke with a start. No bear, no strange sound, everyone fast asleep. Was it just a dream? He immediately went to find the bone that had made that strange sound the day before and kept it by his side.

The next morning, after his friends left to collect firewood and water, Ragnar got busy. He used a stone to grind the end of the bone down until it was comfortable for his lips, and then he kept trying until he could make that strange sound again, and again, and again:

**GROOOONG—
GROOOONG—
GROOONG**

He learned that he had to buzz his lips exactly the same way every time to make the bone **resonate**.

Later that day when his friends returned, Ragnar sounded the bone as they entered the cave. One friend fled, screaming. A few others hid in a corner of the cave. Many of them thought that Ragnar had magic powers and dropped to their knees in awe. That eerie, bewildering sound seemed as if it was coming from another world! A few of his friends found bones on the ground and tried to copy Ragnar, but they could not make it sound. Everyone agreed that Ragnar had special powers. Ragnar had made, and played, what we now call a lip-blown instrument. And this was just the beginning.

14

Learning Activities, cont.

Ask for volunteers to play a bone trumpet or something similar (see **Teaching Tips** on p. 7) and be sure to clean it between each use. Allow each student a few attempts. While some may make it sound straight away, others may find it more difficult. Encourage their peers to offer advice. Explain that unlike the sound of the voice, which can go up and down, the bone can only play one note, and students will need to create exactly the right vibration with the lips to make it happen. Explain, by reference to the previous page, why it is unlikely that someone discovering the sound by accident would be able to do it again a second time without some effort or experimentation. Now, compare

the problems that Ragnar had in getting the bone to resonate twice in a row to learning how to play a musical instrument in general: it often takes many attempts—and trying many different ways—to make the sound happen consistently. Musicians develop their skills through experimentation and repetition.

Ask students to read **Reality Check!** and **Did You Know?** and answer the following question. (There is no right answer!)

Q. Why might prehistoric people have tried to vibrate or “buzz” their lips into objects such as bones, shells or sticks? **A.** Of course we can never know for certain, but it is possible that when people found these objects lying around, they picked them up to see them

REALITY CHECK!

What the Experts Say About

PREHISTORIC SOUNDS

Who really was the first trumpeter?

In reality, there is no way to know who made the first trumpet sounds, or when, where, and with what the first trumpet sounds were made. But there are a few clues.

Firstly, we know that people have lived in areas across the globe for at least 250,000 years. Secondly, bone flutes have been found that are 40,000 years old. Some experts claim that these flutes could have also been played as trumpets (lip-blown instruments).

Finally, we know that trumpets have been used across many parts of the world for over 5,000 years. Experts believe that trumpet-playing developed in many different places and at many different times because people tend to make sounds by blowing into objects. As you can see, there could have been many “first trumpeters” around the world.

What kind of sounds did people make in the Paleolithic period?

They might have made gurgling, grunting, buzzing, cooing, and screaming sounds to show anger, pain, and happiness. People may have copied sounds they heard in nature, such as the noise of the rain and thunder, or animal sounds, such as squawking, screeching, whistling, howling, and singing, because they saw that other animals reacted to those sounds. It is likely that they used various objects to change the way their voices sounded, and probably held their hands to their mouths to make different sounds, too, especially if they made the sound travel further.

SPECIAL PROJECT

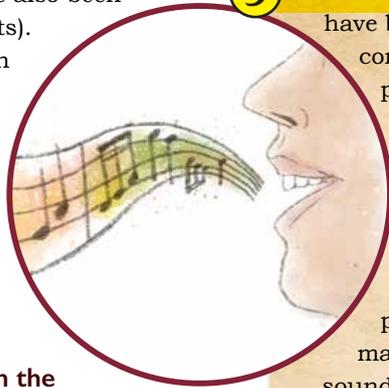
better, to smell them, or even to try to eat them! Once near their mouth, they may have blown into them to remove the contents, which might have created a noise, and they may have also blown, buzzed or shouted at them to make different sounds.

Now, ask students to think about other “first trumpeters” around the world. Suggest that they consider prehistoric people living in a range of terrains such as mountains, forests and plains or by the sea. What kind of objects might they have found to blow into in each of these areas? Ask them what might have inspired them to buzz their lips into these objects even if they had never seen anyone else doing it.

DID YOU KNOW?

9 Music and speech

have been connected since prehistoric times. Some experts think that music came before speech; in other words, people were making musical sounds before they started using words. Others think that music came after speaking, but experts agree that the patterns of rhythm and sound used in music and speech are closely related and have been used by humans for thousands of years.



8 The idea of many “first trumpeters,” or the independent origins of music, has been best summed up by ethnomusicologist Bruno Nettl as, “a series of separate events, derived from a variety of social needs and processes united only by their use of sound distinguished from ordinary speech.”⁶ A good example of this can be found in Australia, where Aborigines developed a technique for playing the didgeridu (an instrument made from a hollowed-out eucalyptus branch—see Chapter 6) which was unique to the continent and which developed independently from styles of playing lip-blown instruments anywhere else in the world.

9 The question, “which came first, music or speech?” remains hotly debated by scholars in disciplines as diverse as anthropology, cognitive neuroscience and musicology.⁷ However, there is a general consensus that “the evolution of music is highly intertwined with the evolution of speech.”⁸

SPECIAL PROJECT #1 Divide students into small groups and have them collaborate to write their own “first trumpeter” story based on the previous discussion. These can be recited or even acted out as a part of a performance for peers or students’ families. This can also be given as an optional assignment on the **My Weekly Practice Cave** form (TE p. 131).

SPECIAL PROJECT #2 Ask students to make a simple lip-blown instrument using materials they find in their home and bring back to share with the class. Consider using homemade instruments in performances to highlight students’ accomplishments. (Can be given as an optional assignment)

Summary

In Chapter 1, students will find out how Ragnar turns a broken bison horn into a lip-blown instrument that amplifies sound due to its shape. Students will also learn the role that posture, embouchure formation, and breathing play in sound production.

CHAPTER 1

HOW TO PLAY A BISON HORN



Objectives

Students will:

- **Understand** how tubes of different lengths create higher and lower sounds
- **Learn** how a conical shape amplifies sound
- **Experience** how correct posture facilitates efficient use of the respiratory system
- **Identify** the characteristics of embouchure
- **Perform** the sequence of events necessary for sound production
- **Learn** about safety & hygiene issues related to playing lip-blown instruments

KEY WORDS

APERTURE

The opening between the lips when the embouchure is formed. If it is the right size, the lips will vibrate easily when you blow.

EMBOUCHURE

The shape your mouth makes when you play a wind instrument (from the French word *bouche* meaning "mouth").

INHALE

To breathe in.

POSTURE

The way you sit or stand, or hold your body. Your posture will affect how well you can breathe when playing your horn.

OVER TIME, Ragnar began to play his bone trumpet for important occasions such as when a baby was born or a member of the group died.

- 1 The sound made everyone feel safe, as though the spirits and gods were protecting them. Ragnar made several more bones into trumpets and discovered that shorter, smaller bones made
- 2 a higher sound, while longer, larger bones made a lower sound. He decided to use each bone trumpet for a different purpose, since they made different sounds.

One of the animals that his band hunted was the mighty bison, which was similar to a buffalo. Bison provided great amounts of food, as well as materials for clothing, tools, and shelter. Bison also had horns, which could be cleaned out and used to carry water.

16

Learning Activities

Ask students to read, or listen online (www.hearragnar.com) to **Chapter 1: How to Play a Bison Horn**. Demonstrate lip vibration into tubes of different lengths, and ask students which sound is higher and which is lower. Compare the tubes to the strings of a piano or a guitar and explain that when a string is struck or plucked, it makes a sound wave that travels back and forth across the distance of the string. The shorter the string, the less time it takes for the sound wave to make the round trip. This makes the vibration faster and the sound higher.

Ask students the following question:

Q. How do you think Ragnar realized that he could make the cracked bison horn into a trumpet? **A.** As Ragnar already knew that he could make a noise by blowing into a bone, he had worked out that other hollow objects could also be made into trumpets.

Now ask students why they think the bison horn sound was so much louder than the bone trumpet. Explain that the shape of the horn, gradually expanding throughout its length, helps the sound to travel more efficiently, making it sound louder than the bone trumpet. (see **Key Points** No. 3) To demonstrate this

One day, when a group of children returned from a nearby stream after collecting water in their horns, a young girl saw that the water had leaked out of hers. Its tip was cracked, so she asked Ragnar to take a look. Ragnar brought the bison horn back to his cave and examined the crack. How could he mend it? Then he had an idea. Instead of fixing the horn, he broke off the end and started grinding it down with a stone until it was smooth. He put the horn to his lips and blew:

TRAAAAAAAAAAAAA

- 3 A fantastic sound—much louder than the sound from the bone trumpet—rang out. Several people peered into the cave to see what was going on. Ragnar knew right away that the bison horn could be very useful. He started practicing the best way to play it. He experimented with different ways to hold his mouth and lips, and practiced using his breath and tongue to make shorter and longer sounds. After a while he discovered that it was easier to play when he was sitting or standing in a certain way. Ragnar was always curious and enjoyed figuring things out.



REALITY CHECK!

What the Experts Say About

PLAYING LIP-BLOWN INSTRUMENTS

In our story, Ragnar tried different ways to play his bison horn. However, there is no way to know how prehistoric people played lip-blown instruments—how they used their lips, mouths, tongues, and breath to make sounds. Today, people all over the world play lip-blown instruments such as trumpets, trombones, and French horns. Over time, players have learned that **posture**, **embouchure**, and how they breathe and blow are all very important in making a good sound.

17

Key Points

- 1 Ragnar was assuming the role of a shaman, using his otherworldly sounds to comfort members of his group. (see also **Unit I Intro** and **Chapter 2**)
- 2 Because bone trumpets are short, they will typically produce only one note, called the fundamental, and that note will sound higher or lower depending on the length of the bone.⁸
- 3 Given the same energy input from the lip vibration, it is the expanding shape and larger opening at the end of the bison horn that helps to radiate sound more efficiently than a quasi-cylindrical bone trumpet could.⁹ (See key word **conical** on TE p. 51)

Teaching Tips

The following pages include suggestions for teaching the basics to beginning level brass students. It is important to keep in mind that no single approach works for all students and situations. We will offer various ideas and strategies, but with the understanding that all methodologies come up short if students are not creatively motivated to make sound in the first place.

point, have students play a tube trumpet, and then a mammal horn to compare. If a mammal horn is not available, use a tube trumpet with a plastic funnel inserted into one end.

As a further example, show how cupping your hands in front of your mouth helps to project your voice. Point out that all modern brass instruments, such as trumpets, trombones, and French horns, have a bell that makes the sound travel efficiently.

Ask students to read **Reality Check!** and explain that in order to become good at playing, they will need to experiment

with things like posture, embouchure, and breathing and learn what works best for them.

SPECIAL PROJECT Make a megaphone out of large sheets of card and experiment, using the voice and/or lip vibration to see how the cone makes the sound perceptibly louder. Attach the megaphone to the end of a tube. Make comparisons, and then make some music!

Teaching Tips

Review **Get Ready, Get Set, Play!** during playing activities throughout the book to help students build healthy playing habits. Refer back to these pages regularly, and be sure to remind students of Ragnar's advice: "Practice every day that you eat!"



PLAY IT SAFE(LY)!

Lip-blown instruments can be very loud—

NEVER, EVER PLAY ONE INTO SOMEONE'S EAR!

You could cause them permanent damage.

HOW TO MAKE A SOUND!

To make a sound on a bison horn, or any other lip-blown instrument, your lips must buzz into it. If the **aperture** is the right size, the lips will vibrate easily when you blow the air. Your posture will affect how well you can breathe. Bad posture pushes the rib cage inward, which stops the lungs filling properly. Good posture lets you move your air easily, both when breathing in and blowing out, which makes your sound strong and resonant.

GET READY

CHECK YOUR POSTURE

- **Sit tall** at the front of your chair, feet flat on the floor.
- **Don't slouch!** Keep a forward curve in your lower back.
- **Lift your arm(s) up and out.**
Don't rest your arms against your side!

Learning Activities

After reading **How to Make a Sound!** and **Get Ready: Check Your Posture**, review the key word **posture** on p.16. Ask students to slouch in their chair, take a breath, and talk about what they have done today until their air runs out. Then ask them the following questions:

- Q. How long could you keep talking?
- Q. Was talking easy or difficult?

Ask them to do the same thing again, this time with good posture and a full breath so that they can experience a more resonant and easily projecting sound. Demonstrate the same using a horn or a trumpet.

After reading **Get Set: Check Your Embouchure** and reviewing key words **aperture** and **embouchure** on p.16, demonstrate "Tuck" and "Point" and ask students to form their embouchures as indicated. (If possible, pass out mirrors or allow students to use the the "selfie" camera function on their smartphones so they can see their own face.) Explain that tucking in the corners of the mouth makes them firm, which helps to hold the embouchure in place and keeps the cheeks from puffing out. Show how the pointed chin position also helps to hold the embouchure in place, while keeping the aperture open, preventing the lips from pushing together and cutting off the airflow. With these points in mind, ask students to form their embouchures again, this time putting the mouthpiece to their lips. Explain



PRACTICE TIPS!

- Find your own "practice cave," where you can concentrate on playing.
- Find a firm chair to sit on. Always check your posture and embouchure before you play.
- Practice every day that you eat!

18

that the mouthpiece should lean against the lips (balanced between the upper and lower teeth and jaw) like your head lying on a pillow, and saying "yew" helps to bring the embouchure forward, providing more cushion for the mouthpiece. (See **Teaching Tips** on TE p. 29).

Read **Play! Count, Breathe, and Blow!** and ask students to count to four while tapping their chest to imagine a heartbeat. Ask students to practice this sequence

with air alone (no mouthpiece) using a well-formed embouchure:

"One, Two, Three, OH (inhale), Tah" (or "Tew")

Check that students are maintaining the correct posture and embouchure, and repeat as necessary. Then ask students to put the mouthpiece to their lips and practice the sequence with airflow only (no vibration). Can they still maintain good posture and embouchure? Repeat

Key Points

There are many schools of thought when it comes to teaching the “attack” or “release” of the sound on a brass instrument. Typically, brass players use the consonants “T” or “D” to start the sound (as well as “K” and “G” when multiple tonguing), but there are other ideas that can have significant pedagogical benefits. Some teachers ask students to practice releasing the sound from closed lips, saying “Poo” or “Pew” which can be a very effective way to align the embouchure and refine its response. Others ask students to practice releasing the sound from open lips, saying “Ha” or “Who” which can be a good way to ensure that air is flowing at the start of a note. For more pedagogical advice on issues covered in this chapter, ask your local brass expert, or check the bibliography on p.151.

Teaching Tips

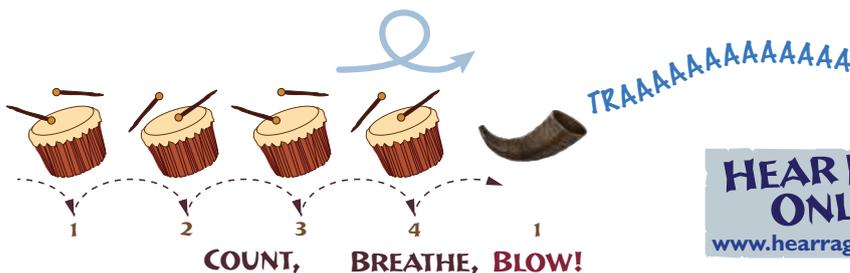
Although many brass teachers warn against excessive mouthpiece pressure, it is our belief that if the embouchure is formed correctly and air is flowing through the instrument, it is not typically problematic. When told that they should be careful to avoid pressing the mouthpiece against their lips, students sometimes compensate by pushing their lips together, which causes compression of the airstream. If you feel that mouthpiece pressure is a problem for your students, try explaining that the embouchure acts like a round rubber washer on a garden hose connector. The pressure of the mouthpiece against the lips needs to be just enough to keep the air from leaking out. Mouthpiece pressure should increase naturally along with the increase of airflow, and should decrease accordingly when the airflow slows/relaxes.



CLEAN UP! YOUR ACT!

Ragnar discovered a long time ago that to stay healthy, you need to keep your horn clean. Always remember to:

- Clean your mouthpiece and wash your hands regularly to avoid spreading germs.
- Use warm water and antibacterial soap to clean your mouthpiece.
- Only share mouthpieces after they have been cleaned.



19

GET SET CHECK YOUR EMOUCHURE AND BRING THE HORN TO YOUR LIPS

- **Tuck** in the corners of your mouth, as though you are saying “eee-yew.”
- **Point** your chin forward and hold your lips very close together. Don’t actually push them together, but hold them gently and imagine you are about to say WHOOO (like the hoot of an owl).
- **Place** the mouthpiece on your lips, right in the middle: left to right, and top to bottom.

PLAY! COUNT, BREATHE, AND BLOW!

- **Count:** Imagine the sound of your heartbeat or a drumbeat and count along in groups of four beats: “one, two, three, four, one, two, three, four. . . .”
- **Breathe:** **Inhale** on the fourth beat (one beat before you play). Imagine you are making the sound “AAAH” or “OH.” Keep the mouthpiece lightly touching your lips as you inhale.
- **Blow:** Blow out on beat one, starting the vibration with your tongue. Imagine you are going to say “Tah,” or “Tew.” The tip of your tongue makes a “T” sound just behind your top teeth, which should start the note clearly. If the vibration doesn’t start, try: 1) moving your lips closer together, or 2) moving your lips further apart, or 3) blowing the air a little faster.

the sequence, this time producing a vibration, starting the sound with “T” or “D.”(see **Key Points** on TE p.29)

Now demonstrate what happens when the aperture is closed (with lips pushing together) and ask students why the sound isn’t ringing.

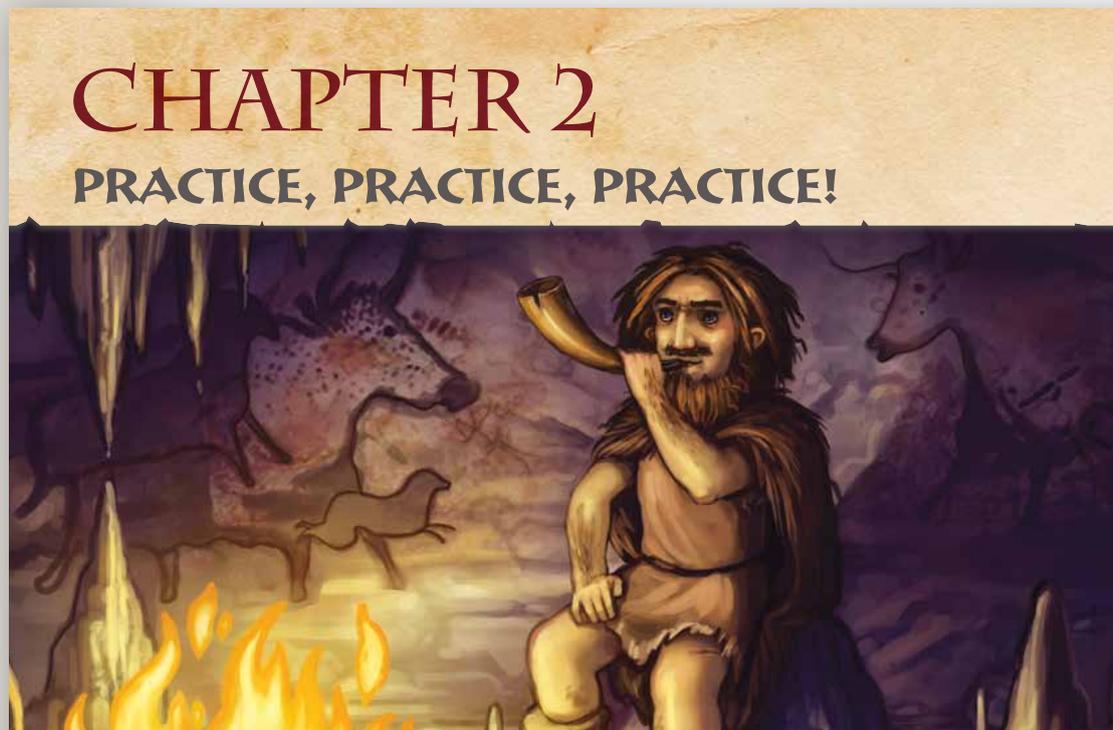
A. Because I am pushing my lips together!
When this happens, the air has to be forced through them which results in a thin and compressed sound.

Then demonstrate how a good airflow and correct embouchure can make a beautiful ringing sound with little physical effort. It is important to make students aware of the sensation of air flowing through the instrument, as opposed to the feeling of air compression, whether internally or against the embouchure.

Discuss **Practice Tips!** on p.18, especially the importance of finding a “practice cave” to help reduce distractions.

Summary

In Chapter 2, students will learn about Ragnar's newly found uses for his bison horn and why it became necessary for him to practice the technical aspects of playing as well as the calls and signals themselves in order to provide a reliable form of communication. Students will also learn about the caves where Paleolithic people lived and the role that art and sound probably played in them. This leads to the introduction of the "Practice Cave" pages in each chapter, where students learn how to play, either by listening to their teacher or by using online resources.



Objectives

Students will:

- **Understand** the importance of regular practice with repetition
- **Draw** connections between making a space resonate and making a horn resonate by buzzing their lips
- **Explore** other ways that caves might have been used as a part of prehistoric sound production
- **Identify** places suitable for their own practice
- **Practice** long note and articulation exercises, improvisations, and assigned pieces

KEY WORDS

ARTICULATION

The use of the tongue to clarify and shape sounds. The "T" or "D" at the beginning of the blow gives a clear start to the sound, like a snap of the fingers.

IMPROVISE

To make or create something using your own ideas and skills.

PITCH

How high or low a note sounds.



20

1 BECAUSE THE BISON HORN was so loud, Ragnar could use it to communicate with friends far away from camp. He could also use it to call everyone together, or to warn of danger. After a successful hunt, he blew it to let people know the good news. He also used it to announce the start of a celebration.

2 To make the calls and signals easily recognizable for his friends, Ragnar needed to practice them over and over until he could play them the same way every time. He also realized that he had to work on other things, such as playing long notes and practicing **articulation** to make his sounds clear and steady.

Ragnar liked to practice by himself in his cave, where he could concentrate on playing and not be distracted by what was going on outside. He liked to **improvise**, often imitating the sounds of animals. These sounds echoed inside the walls of the cave.

Teaching Tips

Use the activities in the **Improvise!** section of the **Practice Cave** to inspire students to create their own music. Write down compelling examples on TE p. 157-159 (noting names of contributors), for use in subsequent classes and future performances.

Learning Activities

Students will read, or listen online to **Chapter 2: Practice, Practice, Practice!** They will discuss key words **articulation** and **improvise** as they relate to Ragnar practicing in his practice cave.

Ask students to improvise a signal to warn people of danger. Allow them all to play at the same time for a few minutes to try out their ideas, and then ask a volunteer to play

their signal for the class. See if the student can repeat it in the same way, and then ask another student to try and copy it. Use this exercise to explain why it was important for Ragnar to practice signals until he could play them the same way every time.

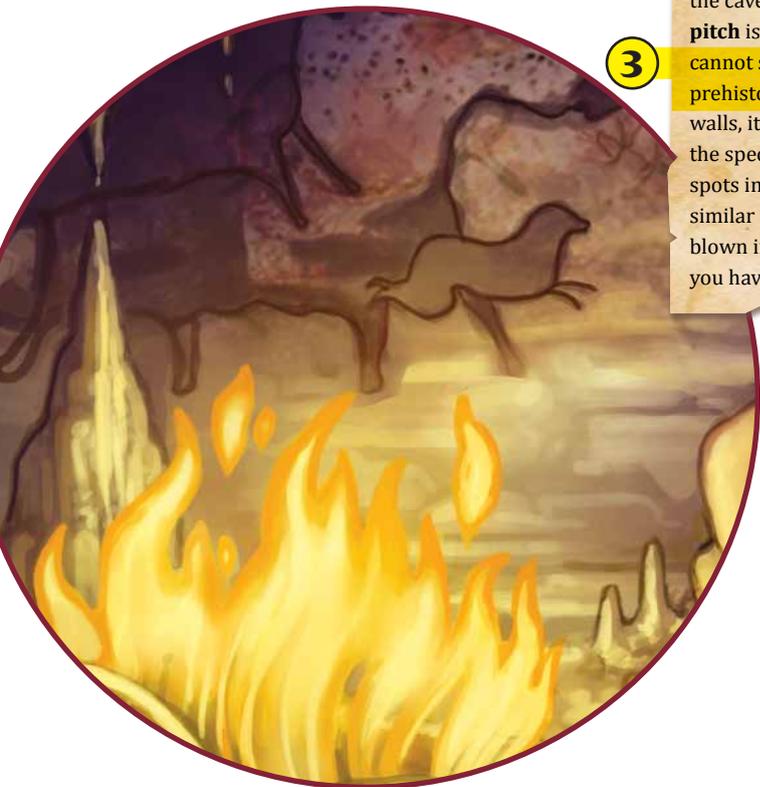
Explain that it is also important to practice basic skills such as long notes and articulation in order to become proficient at the trumpet in just the same way that basic skills in sports need to be practiced.

REALITY CHECK!

What the Experts Say About

3 PALEOLITHIC CAVES

Caves that were once inhabited by Paleolithic people have been discovered all over the world. Many of them are located in France and Spain and contain paintings from 10,000 to 35,000 years ago. The paintings include images of horses, bison, and deer. We don't know if prehistoric people practiced playing horns in caves. But some experts who study the caves think that prehistoric people used the paintings and musical sounds as part of a ritual, or ceremony, to communicate with their gods or with the spirit world.



DID YOU KNOW?

On cave walls, prehistoric people often made marks (called fluting) with their hands and fingers. Experts discovered that in many of these spots, the caves resonate when a specific **pitch** is sung or played. Although we cannot say for sure that this is why prehistoric people marked the cave walls, it is possible they recognized the special sound properties of these spots in the cave. These spots are similar to a harmonic note on a lip-blown instrument: to make it resonate, you have to buzz the right pitch into it.



3

21

Ask students to suggest some of the things they need to practice in a range of sports. Next, play the soundscape (at www.hearragnar.com) which accompanies the Chapter 2 illustration and ask the following:

Q: Which basic skills is Ragnar practicing in his cave? **A:** Long notes, moving to different notes, articulation, and humming while playing. (this technique is used in the playing of the didjeridu- Chapter 6)

Review key words **resonate** and **pitch**

(p.13 & 20) and then read **Reality Check!** and **Did you Know?** Ask your students if they have ever discovered a resonant sound in a room that contains hard surfaces, such as a bathroom or a long, tiled hallway. Encourage them to find such spaces in their own homes, or elsewhere and vocalize, moving the pitch of their voice up and down until they hear a strong resonance or an echo. Relate this to the way in which they make a pitch resonate in a simple tube, horn, or trumpet.

Key Points

- 1 Ragnar has learned that the louder sound of the bison horn can be used to communicate more effectively because it can be heard across large distances.
- 2 The importance of making his signals clearly recognizable made it necessary for Ragnar to practice for consistency, through repetition.
- 3 It is possible that man's awareness of sound led him to experiment with pitch and resonance in a range of spaces and settings. The acoustic effects of echoes in the caves in which Paleolithic people lived are obvious to anyone walking through them, and experts suggest that prehistoric people used echolocation to navigate cave systems, just as bats, some birds and even some baboons do. Significantly, music archeologists and paleologists have discovered that the majority of paintings found in Paleolithic caves are located where there are also strong acoustical phenomena. These include places that can be made to resonate at a certain pitch to produce standing waves or where strong echo effects are audible.¹⁰ Additionally, many experts think that Paleolithic people may have made extraordinary sounds as part of shamanistic rituals and that cave art also played a part. To those inside the cave, such sounds may have appeared to be coming from another world, perhaps signaling the transition between life and death. We don't know for certain that Paleolithic people took advantage of the sound properties of their caves, but it is, as Jeremy Montagu has argued, "hard to imagine that they would not have been used."¹¹ If Paleolithic people could in fact produce standing waves in caves, it could mean that they were able to sustain and control pitch with their voices. While it is virtually impossible that they understood the properties of sound, they may have had an awareness of the possibilities of sound.¹²

Introduction to the Practice Cave

The *Brass for Beginners*® method makes use of a “learn by ear” approach, which encourages the development of aural skills. This is one of the core components of audiation, the name psychologists use to describe the range of abilities which musicians develop to remember, imagine and organize musical ideas in their heads.¹³ It can apply both to sounds perceived externally and those which are a product of a musician’s imagination. In the “Practice Cave,” students develop these skills either by listening to and copying their teacher or by using online resources. Progress can be measured using either student-self evaluation forms and/or teacher assessment forms. Instructions on how to use these assessments can be found on p. 129-135.

Practice Cave

Long Note Exercises

Ask students to play a long note while you look at a clock and count out loud. Have them put their trumpets down and note their time once their breath runs out. Then pose the following question:

Q. How do you hold a note for a long time when playing? **A.** Take a big breath and blow very slowly to make air last as long as possible.

Repeat 3–4 times, each time striving to hold the sound longer than before. If students are not improving their time, ask them to think about why and try again. Use pinwheels to illustrate how the speed of the air determines the length of time they can keep the wheel spinning, and relate this to playing long notes. Pinwheels will come in handy when discussing how to play softly or loudly, and how to get softer or louder.

Harmonic Note Exercises

“Harmonic Note Exercises” and strategies for teaching them are introduced in Chapter 3.

CHAPTER 2 PRACTICE CAVE EXERCISES!

LONG NOTE EXERCISES

How many seconds can you hold your sound?
Can you keep your sound steady?

- Hold a sound steady for **4 seconds**
- Hold a sound steady for **6 seconds**

TIME YOURSELF!

ARTICULATION EXERCISES

Try to make your sound start clearly by using the tip of your tongue to say “T” or “D” each time you start a new note. It should sound like a snap of the fingers.

1 a. 2 a.
b. b.

MAKE MUSIC!

IMPROVISE

- The sound of a galloping wild horse
- The sound of a roaring lion

REMEMBER! 1
GET READY,
GET SET,
PLAY!

PLAY ALONG

- Make yourself sound big and scary!
- Sound the alarm: a dangerous storm is coming!
- Signal to people far away that it is time to come home

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

3 **ARE YOU A MUSIC READER?** Follow along with music notation for these exercises on page 75.

22

Articulation Exercises

Demonstrate finger snapping and compare it to using the tongue to start the sound.

Q. How is the sound created when you snap your fingers? **A.** The thumb and middle finger press together, building up energy, which is released when the finger slips off the thumb, resulting in a sudden burst of speed. This causes the middle finger to strike the palm of the hand, which creates the snapping sound.

Explain how this relates to articulation:

The air builds pressure behind the tongue, and when the tongue releases the air (from behind the top teeth), a sudden burst of air makes the “T” sound, helping the vibration to start suddenly, resulting in a clear start to the note. Articulation can also be described using the example of plucking a string on a guitar or a harp: the finger puts pressure on the string, and when it slips off it, the string starts a

Content

Chapters 2-10 include a **Practice Cave** page dedicated to playing activities. Each 'Practice Cave' page is divided up into two parts:

1. EXERCISES!

- i. Long Note Exercises
- ii. Harmonic Note Exercises
- iii. Articulation Exercises

2. MAKE MUSIC!

- i. Improvise
- ii. Play Along

Exercises! are designed to help develop the skills required to play the **Make Music!** pieces. The **Improvise** and **Play Along** prompts under 'Make Music!' are directly related to Ragnar's unfolding story (which can be heard at www.hearragnar.com).

Note I: *We will never know what music or sounds were played on the instruments covered in 'Around the World in Twenty-One Trumpets', so the 'Make Music' material incorporates many rhythmic figures and motifs idiomatic to brass playing in general. This helps students prepare for the kind of music they will encounter in a school band or an orchestra on a modern brass instrument.*

Note II: *As you look through 'For Music Readers' (found in back of student book or in within each chapter of Teacher's Edition), you will notice that the material is significantly more advanced than music in a typical beginning band book. If students aren't limited to playing only music that they can read in notation, they can manage very sophisticated musical content, building their capacity for learning a great deal of brass vocabulary from the start.*

Note III: *Additional samples of 'Exercises!' and 'Make Music!' pieces can be found in the 'Practice Cave Addendum' (p. 137–146) for each chapter. Two- and three-part arrangements of 'Make Music!' pieces are included to offer additional repertoire for performance.*

sudden vibration. Explain how to articulate consecutive notes using the analogy of a stone skimming on water: the air keeps moving as the tongue bounces off it. Ask students to make the sound with air alone before playing: "Too, too, too, too.." The feeling of blowing the air shouldn't stop for each note.

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 for volunteers to share their ideas.

Play Along

Discuss the pieces as they relate to Ragnar's story and play them for students to copy, or use the "Listen & Play" audio tracks at www.practicecave.com.

Ask students to think about how they sound and whether their performance is achieving the goal for each piece. If not, how can they improve?

Key Points

- 1 Get Ready, Get Set, Play!**
Establishing good playing habits on any instrument requires regular attention to the fundamentals. As you move from chapter to chapter, refer back regularly to **How to Make a Sound** on p. 18–19 (TE p. 28–29). Review **Get Ready** (Posture), **Get Set**, (Embouchure) and **Play!** (Count Breathe, and Blow!) in every class. In a group setting, having students breathing together in rhythm is an extremely effective way of building consistency in sound production while creating a sense of ensemble. To reinforce this point, ask the students to respond to following question, like a sports cheer:
Teacher: "When do we breathe?!"
Students: "One beat before we play!"

- 2 Listen & Play Online**
Show students how to access online resources at practicecave.com. Here they will have an opportunity to learn by listening to professional musicians. Strategies for making the most of these resources will be discussed in subsequent "Practice Cave" chapters.

- 3 Are You A Music Reader?**
Show students how to find "For Music Readers" in the back of their book pointing out that each "Practice Cave" page provides a specific page number reference. (In the Teacher's Edition, these pages are included within each chapter for quick access). Although the aim is not to teach students how to read notation, some students find it very helpful to have a visual reference, and by default, all students will gain some understanding. Simply explain that each note-head represents an individual sound, and challenge students to follow along while listening and playing. However, be sure to instruct students to spend at least half of their time playing without looking at notation to encourage the development of aural skills.

Teaching Tips

Practice to Perform!

Creating opportunities for students to perform for their peers, family, or the public can be one of the most effective ways to inspire their development. It is never too soon to start working towards a performance. As soon as students can play something reasonably well, practice performing it at the end of every class. Don't forget to keep track of which improvisations and pieces they have learned so they can be added to their repertoire. When rehearsing pieces, ask students to both evaluate their performances and suggest ways to improve them. Use the following guidelines to help create a structured performance/rehearsal environment.

1. Students should be encouraged to stand or sit with good posture.
2. If possible, organize students so that they are in a semi-circle to enable them to see and hear each other.
3. Put instruments up together on cue and hold them in a consistent manner.
4. Start and stop with precision, watching the leader/conductor carefully, from start to finish
5. Put instruments down together on cue.

Explain that performing is a privilege, not a right. We earn the opportunity to perform through practice and preparation. Show respect for people who are taking their time to listen by giving your best effort. Explain how becoming distracted makes it very difficult to play well, and give students strategies to focus their attention in order to ensure the best outcome. The performance guidelines above are a good start!

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

PRACTICE CAVE

CHAPTER 2

Practice, Practice, Practice!

EXERCISES!

LONG NOTE EXERCISES

How many seconds can you hold your sound?
Can you keep your sound steady?

- Hold a sound steady for **4 seconds**
- Hold a sound steady for **6 seconds**



ARTICULATION EXERCISES

Try to make each note start clearly with a "T" or "D"

MAKE MUSIC!

IMPROVISE

- The sound of a galloping wild horse
- The sound of a roaring lion

PLAY ALONG

- Make yourself sound big and scary!

- Sound the alarm: a dangerous storm is coming!

- Signal to people far away that it is time to come home



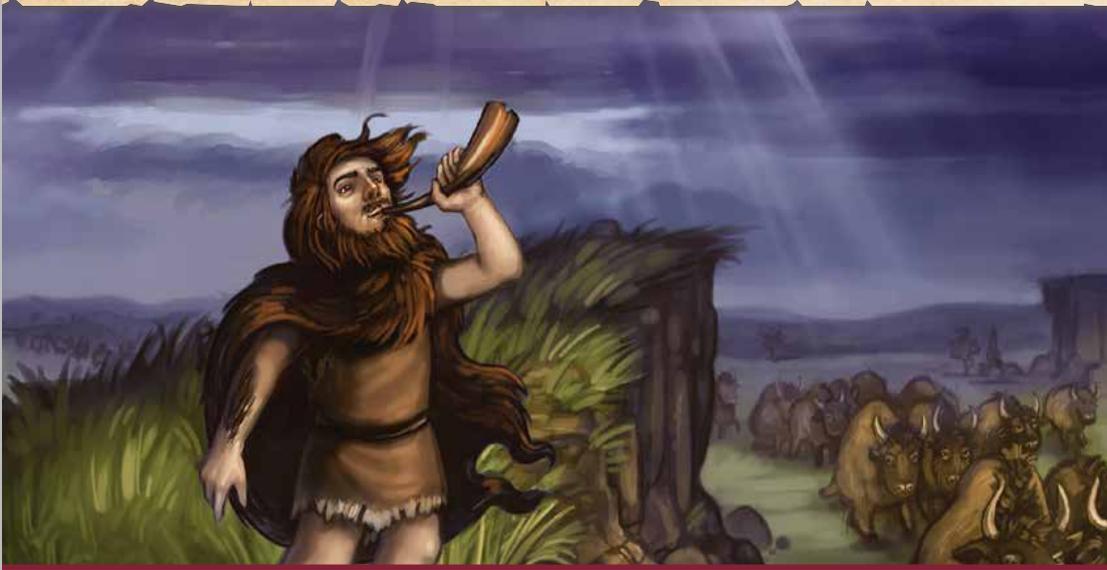
Learning Activities

Progression and Assessment

Divide students into "Practice Cave Stations" based on the checklist categories: **Long Tones, Articulation, Harmonic Series**, (beginning in Chapter 3) and **Make Music!**. Have students practice together and listen to each other. Encourage them to help each other while you travel between stations to check their progress and offer guidance. To keep track of progress use the **Unit 1: Teacher Assessment** form (TE p. 129) or ask students to fill out **Unit 1: Student Self-Evaluation** form (TE p. 130), discussing how they can improve their scores. Print out and distribute **My Weekly Practice Cave** forms (TE p. 136) to help students remember what to practice at home.

CHAPTER 3

STUMBLING ON H2



KEY WORDS

MELODIC

Pleasant, song-like sounds.

RHYTHMIC

A steady repeated pattern of sound, like a drum beat.

ONE OF THE MOST IMPORTANT uses Ragnar found **1** for his horn was hunting bison. Bison were very big and extremely dangerous, but loud sounds scared them. Ragnar and the hunters made a plan to confuse and trap the animals. They watched the movements of the bison herds for weeks. One evening, after a storm had passed, Ragnar climbed up a cliff and waited out of sight until the bison neared a mountain pass. Meanwhile, the hunters hid on the other side of the pass, their spears at the ready. As the bison approached, Ragnar took a deep breath and blew his horn as loudly as he could. In the still of the evening, the sound echoed through the valley and alarmed the bison so much that they began a furious stampede. Ragnar could feel the earth trembling as they charged. Most escaped, but Ragnar's friends were able to cut off the stragglers, hurling their spears at them. They were overjoyed! The hunt would provide food for weeks and plenty of materials to make clothing, tools, and shelter.

2 On the trail home, Ragnar played triumphant, **rhythmic** music on his horn. This kept the hunters in good spirits. It also helped them move together as they carried their heavy load.

23

Learning Activities

After reading, or listening online to **Chapter 3: Stumbling on H2** (or the accompanying soundscape, "On the Hunt"), ask students the following:

Q. How did Ragnar's horn make the bison stampede? **A.** Loud sounds scared them.

Q. How do you make a loud sound on the trumpet? **A.** Blow faster or more air.

Demonstrate making a loud sound. First blow air alone, and then into the trumpet. Ask students to repeat- air alone, then

trumpet. Is their sound loud enough to frighten a herd of bison? Ask for volunteers to play loud sounds. It is preferable to have students think about blowing air *faster* as opposed to *harder*.

Discuss the key word **rhythmic** as it relates to Ragnar's story. Ask students to imagine carrying a heavy load through a forest, having them walk together around the classroom playing their trumpets. Use this activity to help prepare students to improvise music for marching home on p. 25 (TE p. 37). Ask students to think of other examples of music that is played while people move together. **A.** A march or music for a procession.

Q. How did Ragnar get idea that the stick could be made into a trumpet? **A.** Because it was hollow, like a bone or horn.

Summary

In **Chapter 3**, students will learn about the use of early musical instruments for hunting and think about possible origins of rhythmic and melodic music. They will discuss the ability of lip-blown instruments of increasing length to play more notes (overtones) and learn about the harmonic series of the natural trumpet. As students begin to experiment with variables associated with navigating the harmonic series, they will learn how to articulate in both a detached and connected (staccato and legato) manner, enabling them to play song-like and march-like music.

Objectives

Students will:

- **Understand** why Ragnar's bison horn was important to the well-being of his group
- **Learn** how to play loudly
- **Consider** how and why the stick trumpet could play two notes
- **Experiment** with the variables associated with moving between notes of the harmonic series
- **Contemplate** the origins of rhythmic and melodic music
- **Learn** how to play (articulate) in a march-like and song-like manner

Key Points

- 1 Many modern instruments originated from objects used in hunting. Examples include:
Strings: The string of a hunting bow can be plucked or struck to produce a musical effect, while the bull-roarer, a cord tied to a flat piece of wood used to trip fleeing animals, can be whirled around the user's head to produce a sustained sound.
Woodwinds: Sharp edges of broken bones or chipped stones can produce whistling, flute-like sounds. Blades of grass held between the thumbs and blown were used to call deer, giving rise to single and double reed instruments.
Percussion and Brass: Objects capable of producing loud sounds when shaken, struck, scraped, or blown, can be used to startle game, or to signal over great distances.
- 2 Humans have a unique ability to synchronize their movements with a sense of pulse, beat, or rhythm. Although experts can't explain why this is, they agree that our ancestors used rhythm to coordinate their activities in both work and social environments.¹⁵
- 3 Traditionally, the Australian *didjeridu* was made from Eucalyptus branches bored out by termites. (TE p. 50-53)
- 4 Although several variables determine the number of overtones that can be produced on an instrument of a given length, generally speaking, the longer the tube, the greater the number of available overtones. (TE p. 8-9)

DID YOU KNOW?

Conch shells have been used as trumpets since prehistoric times. They are found in coastal areas all over the world, and trumpets made from these have been discovered in ancient sites that were thousands of miles from where conch shells were originally found. The shells with broken-off tips or holes can be blown, and can produce a very loud sound over long distances. We learned how Ragnar got the idea to buzz his lips into a bone, a bison horn, and a hollow stick. How do you think prehistoric people might have come up with the idea to make a trumpet sound with a conch shell?



24

Not long into the journey, Ragnar stumbled over a small tree branch lying on the path. As he moved the branch out of the way, he noticed insects falling out of the end. The insects had eaten all the way through the inside, making a hollow center. Ragnar took the branch home with him, and while his friends were preparing a feast to celebrate the hunt, he got to work. Using a sharp stone, he carved the end to make it comfortable for his lips and gave it a blow: **DAAAAAAAAAAAAAAAAAAAA!**

Then he blew his air harder to see how loud he could make it, and suddenly the pitch went up to a much higher sound:

DAAAAA-EEEEEEEEEEEE!

He couldn't believe it! This stick trumpet could play two different notes. Ragnar didn't know it, but he had stumbled on the second note of the harmonic series, H2!

DAAAAAAAAEEEEEEEEAAAAAAAA...DAA DAA DAA DEE DEE DAAAA... That night after the feast, Ragnar played **melodic** music on his new stick trumpet. Everyone swayed and sang along with the joyful sounds. It was a perfect way to end the day.

REALITY CHECK!

What the Experts Say About

PREHISTORIC HUNTING

Paleolithic people across the globe hunted many different animals including buffalo, horses, bison, wild goats, and deer. Hunting took a great deal of time and patience. Sometimes animals were watched, and then followed, for many miles before they were caught. Experts believe that Paleolithic people used various noise-making objects to call, startle, or confuse their prey.

Learning Activities, cont.

Q. How did Ragnar discover that the stick trumpet could play two notes? **A.** He blew harder to see how loud he could play. Ask students turn to p. 8-9, 'It's All Greek to Me!' and point out that longer trumpets play more notes. (See **Key Points** No.4 above)

Discuss the key word **melodic** as it relates to Ragnar's story, and listen online to the accompanying soundscape. Ask students how melodic music is different from marching music. **A.** Melodic music is song-like and smooth, with longer and softer sounds.

Read **Did You Know?** and ask students how prehistoric man might have discovered that a conch shell could be made into a

trumpet. Explain that they probably ate the shellfish they found inside. **A.** They could have broken off the end and tried to blow the shellfish out.¹⁵

Read **Reality Check!** and explain that most musical instruments had their origins in hunting. Ask students if they can think of any examples of noise-making devices used in hunting and discuss some of the examples listed in **Key Points** No. 1 above. Ask students to turn to SE p. 4 (TE p. 4). Point out that our prehistoric ancestors had to find their food daily in order to stay alive, and that many of their activities would have revolved around collecting food and hunting, which is why we refer to them as "hunter-gatherers."

CHAPTER 3 PRACTICE CAVE EXERCISES!



LONG NOTE EXERCISES

- Hold a lower harmonic note for **6-8 seconds**
- Hold a higher harmonic note for **6-8 seconds**

HARMONIC NOTE EXERCISES

① ② ③ ④

ARTICULATION EXERCISES

①^{a.} ②^{a.} ③^{a.}
b. b. b.

REMEMBER

GET READY,

GET SET,

PLAY!

MAKE MUSIC!

IMPROVISE

- Rhythmic music for marching home
- Melodic music with two harmonic notes

PLAY ALONG

- Scare a herd of bison to stampede
- Play rhythmic music for marching home
 - Signal that the hunt was a success
- Play melodic music to celebrate the feast
- **Challenge!** Melodic music for the feast



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 76.

25

Key Points (review)

Get Ready, Get Set, Play!

Refer back to SE p. 18-19 (TE p. 28-29) to review "Posture," "Embouchure," and "Count, Breathe, and Blow!"

Listen & Play Online

Show students how to practise with online resources by using them in the classroom. See **Teaching Tips** on TE p. 39 for suggestions.

My Weekly Practice Cave

Print from TE p. 132, fill out, photocopy, and send home with students to encourage daily practice.

Practice Cave Stations

Divide students into groups based on the categories: "Long Note, Harmonic Note, and Articulation Exercises."

Travel between stations to check progress and encourage students to help each other. Rotate groups every 5 minutes.

Student Self-Evaluation

Ask students to fill out self-evaluation forms either while in their "Practice Cave Stations" or on their own. Ask them to use their forms at home to see if they can improve their scores. Photocopy from TE p. 104.

Practice to Perform

Practice selected pieces at the end of each class, and be sure to leave time for evaluation and improvement through rehearsal. Refer to TE p. 34.

Practice Cave

Long Note Exercises

Ask students to play long notes while you count aloud.

Encourage them to hold a lower note, then a higher note as indicated.

Harmonic Note Exercises

Ask students again how Ragnar discovered that the stick trumpet could play two notes (**A. He blew harder**). Ask them to read **What's a Natural Trumpet?** (SE p. 6-7) and **It's All Greek to Me!** (SE p. 8-9) to further examine the harmonic series. Explain that to play any brass instrument, you must learn

how to play these different notes, and because there are no buttons you must use your embouchure, tongue, and air to make them. Discuss the variables involved in changing harmonic notes found in **Teaching Tips** on TE p. 38.

To help students practice changing pitch using tongue position, sing the sound of a **siren**, moving pitch up and down using the vowels "AH—EE" (low—high). Ask students to sing along with you. A visual cue such as raising and lowering your arm can help students understand the relationship between higher and lower pitches. Demonstrate going from low to high on a mouthpiece, and ask students to repeat. Then try high to low, etc.. Practicing the **siren** helps students to develop the internal mechanism required for shifting between harmonic notes.

Teaching Tips

Navigating the Harmonic Series

Moving between notes of the harmonic series on a brass instrument involves a complex combination of manoeuvres using embouchure, tongue position, and air stream. In the early stages, it is often best to focus on tongue position and/or changing air speed. As each student is different, it can be useful to have various strategies at your disposal to help them develop this important technique. Try one or more of the following variables:

Tongue Position - Change vowel sounds as shown below to move between low and high notes.

Low—————High
"OH—AH—AY—EE"

Air Speed - Encourage students to play lower notes with slow air, and higher notes with faster air.

Aperture - Experiment between a pinhole size for higher notes, and the size of your little finger for lower notes.

Embouchure - Experiment with lip tension: tighter for higher notes and more relaxed for lower notes.

Mouthpiece Pressure - (See **Teaching Tips** on p. 29) Ask students to check that mouthpiece pressure is evenly balanced between their upper and lower teeth and jaw. Using variable mouthpiece pressure as a way of navigating the harmonic series should be used with caution. Nevertheless, as playing higher on a brass instrument requires greater air pressure, which in turn requires more mouthpiece pressure to maintain a seal with the embouchure, it may be helpful to suggest this variable to students who struggle using other strategies. In general, students should be encouraged to find what works for them, while making sure goals are achieved with minimal physical force and the best possible musical results.

PRACTICE CAVE CHAPTER 3

Stumbling on H2

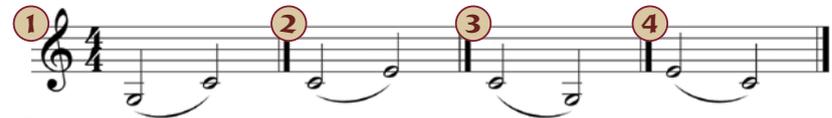
EXERCISES!

LONG NOTE EXERCISES

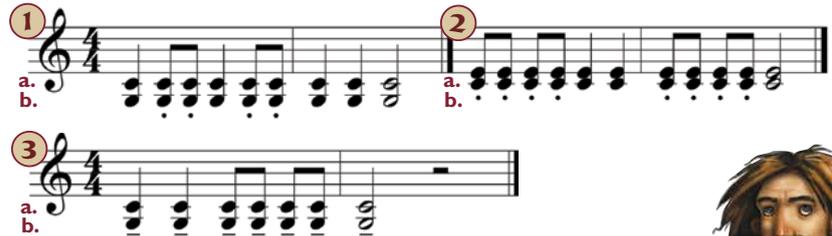
- Hold a lower harmonic note for **6-8 seconds**
- Hold a higher harmonic note for **6-8 seconds**



HARMONIC NOTE EXERCISES



ARTICULATION EXERCISES



76

Harmonic Note Exercises, cont.

Sing exercise no. 1 (by yourself, or with the online sound file) using vowels "TAAH-EE," and ask students to repeat it, singing along with you. Then play it on your mouthpiece, again asking students to repeat it. Finally, play the exercise on the trumpet and ask them to repeat it several times.

Do not worry if students are playing the exercise on different harmonic notes at first. The important thing at this stage is

for them to experience the sensation of shifting, both up and down. You may find that some students have difficulty starting on a lower note. In this case, suggest starting the sound with very slow air, and then accelerating the air before changing the vowel sound to "EE." (Consider trying other variables found in **Teaching Tips**) Repeat this process with exercises nos. 3 and 4, singing "TEE-AAH." If students have difficulty starting on a higher note, suggest starting the note with a smaller aperture



LISTEN & PLAY ONLINE

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

MAKE MUSIC!

IMPROVISE

- Rhythmic music for marching home
- Melodic music with two harmonic notes

PLAY ALONG

- Scare a herd of bison to stampede



- Play rhythmic music for marching home



- Signal that the hunt was a success



- Play melodic music to celebrate the feast



- **Challenge!** Melodic music for the feast



REMEMBER

GET READY,

GET SET,

PLAY!

and faster air. Demonstrate by blowing the air through a well-formed embouchure (no mouthpiece), combining the variables of air speed and tongue position (fast to slow air with "TEE-AAH" - which sounds more like "TEE-OO" when blowing air alone). Ask students to repeat this and then encourage them to replicate the sensation when playing it on the mouthpiece or trumpet. Repeating this process in the classroom will give students the tools they need to develop at home.

Articulation Exercises

In this chapter, students will learn how to articulate detached and connected notes (staccato/legato).

Sing exercise no. 1 for the students (by yourself, or with the online sound file) and ask them to sing it back to you:

"TAAAA, TAT, TAT, TAAAA, TAT, TAT, TAAAA, TAAAA, TAAAAAAA"

or "DAAAA, DAT, DAT, DAAAA,....."

Teaching Tips

Listen & Play Online

Each sound file is heard four times with a count-in before each repetition. There are many creative ways to use this resource, and using it in the classroom is the best way to show students how to use it at home. Demonstrate as follows:

1st time: Listen carefully!

2nd time: Sing or blow with air alone

3rd time: Play it on the mouthpiece

4th time: Play it on the trumpet

If students have difficulty remembering the music, ask them to look at **For Music Readers** while listening and playing. **Goal** Play it 4 times in a row with no mistakes!

Articulation Exercises, cont.

Then blow it with air and articulation alone and ask them to repeat it. Finally, play on the trumpet and ask them to repeat it several times. For exercise no. 3, use the syllables "DAADAA" and encourage students to keep air moving across the notes for a smooth legato style.

Improvise

Discuss the prompts as they relate to Ragnar's story and give students some time to improvise together. After a few minutes, ask volunteers to share their ideas. Combine the best ones and write them down on TE p. 157-159, indicating the names of the student contributors. Rehearse them in every class to prepare for a future performance.

Play Along

Discuss **Listen & Play** pieces as they relate to Ragnar's story and either play them for students to copy, or use the online sound files. Ask students to evaluate how they sound and whether their performance is achieving the goal for each piece. If not, ask them to offer suggestions on how they can improve. For "melodic music to celebrate," first listen to its soundscape on www.hearragnar.com, and then begin by singing:

"DAA,DAA-EEEE, DADADAA-EEEE...."

Summary

In **Unit I Wrap Up**, students will review the possible origins and uses of lip-blown instruments as well as their potential significance in the daily lives of prehistoric people. Students will reflect on the nature of lip-blown instruments—how they work and what natural materials they can be made from—and will recall the need to practice basic skills in order to learn how to play. They will review the **Make Music!** pieces and improvisations they have learned, and read **Winter is Coming** in preparation for starting Unit II.

Objectives

Students will reflect on:

- Possible prehistoric origins and uses of lip-blown instruments, the natural objects they can be made from, and their potential impact on hearers, both human and animal.
- How a lip-blown sound is produced.
- What basic skills need to be practiced in order to learn how to play, and why.
- How simple (short) lip-blown instruments of different lengths produce different pitches, and how longer ones can play more than one note (notes of the harmonic series).

Learning Activities

Ask students the series of questions under **Do You Remember?** on p. 26. Answers are as follows (in order of appearance):

1. Ragnar was making sounds into a hollow bone and accidentally made it resonate when buzzing his lips; the girl's bison horn had a crack in it; Ragnar saw that insects had eaten out the inside of the stick he tripped over in the forest.
2. Buzz the right pitch into it with your lips.
3. A longer horn can make a lower sound.
4. Made people feel safe, as though the spirits and gods were protecting them;

UNIT I WRAP UP

DO YOU REMEMBER?

1. How did Ragnar discover the sound of the bone trumpet?
The bison horn? The stick trumpet?
2. How do you make a lip-blown instrument resonate?
3. Which horn can make a lower sound: a short one or a long one?
4. Name three ways that Ragnar's trumpets helped his family and friends.
5. What kinds of things did Ragnar have to practice so that everyone would understand his signals?
6. Why was it so important for Ragnar to practice his calls and signals?



26

MAKE MUSIC

Chapter 2

- Make yourself sound big and scary!
- Sound the alarm: a dangerous storm is coming!
- Signal to people far away that it is time to come home

Chapter 3

- Scare a herd of bison to stampede
- Play rhythmic music for marching home
- Signal that the hunt was a success
- Play melodic music to celebrate the feast
- **Challenge!** Melodic music for the feast



LISTEN & PLAY ONLINE

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

scared away dangerous animals; kept hunters moving together while carrying their heavy load through the forest.

5. Long notes and articulation.

6. If he didn't practice them repeatedly, he might not play them in a way that his friends could understand clearly.

Review the **Make Music** pieces and student improvisations, recalling how each one relates to Ragnar's story, then read or listen (www.hearragnar.com) to **Winter is Coming** and discuss **Key Points**.

Teacher Review

There are many resources in **Unit I** which should be used in the teaching of subsequent units and chapters. An effective lesson plan (see TE p. 119-128) should utilize the following concepts, elements, and strategies to help reinforce important ideas and encourage positive playing habits.

- **Get Ready, Get Set, Play!:** Review "Posture, Embouchure, and Count, Breathe, and Blow!" often. (TE p. 28-29)

Back to Our Story

WINTER IS COMING

RAGNAR AND HIS FRIENDS depended on the wild animals for their survival. Each year, when the weather turned colder and the animals moved south, he and his friends would follow them. They would travel many miles before setting up a new camp, where they could track and hunt deer.

One day, as Ragnar and his friends gathered their belongings to prepare for the long and perilous journey, he worried that if something happened to him, there would be no one to play the trumpets, so he offered to teach his good friend Annika how to play. She was eager to learn and practiced with Ragnar for several days before the big move. Annika was clever and picked it up very quickly.

The day finally arrived, and the whole group set off together. Ragnar and Annika took turns playing the stick trumpet to keep everyone's spirits up while they pushed forward. A few days into the journey, on a cloudless sunny day, Annika became very tired and handed the trumpet to Ragnar. Ragnar began to play a lively tune but suddenly the music stopped. When the rest of the group looked around to find out what had happened, the trumpet was lying on the path and Ragnar was nowhere to be seen. Where had he gone?



Key Points

- 1 Prehistoric people didn't stay in permanent housing, but rather moved to different locations where they could find food and shelter. (TE p. 5)
- 2 Ideas, traditions, means of communication, beliefs, skills and knowledge have been passed on through generations for tens of thousands of years.^{x7}

Teaching Tips

While moving through subsequent units and chapters, it is important to keep in mind that no one approach works for all students, and not all students need to develop the most efficient and functional sound production and technique in order to have a meaningful and enjoyable experience playing brass. For instance, some students may find it difficult to keep their cheeks from puffing out while they play, while others will struggle to use their tongue to articulate the sound. Who knows? One of those cheek-puffing students might become a Dizzy Gillespie one day!

27

- **Practice Cave:** "Exercises!" prepare students to play the "Make Music!" pieces directly related to Ragnar's unfolding story. "Improvise" prompts inspire students' creativity and provide additional repertoire for performances. (TE p. 33)
- **Are You a Music Reader?:** For students who already read music or who need a visual reference to keep track of the sounds they are hearing. (TE p.33)
- **Listen & Play:** Either demonstrate for students to copy or use online

sound files. Alternate between singing, blowing the air alone, and playing on the mouthpiece in order to help students develop important skills. (TE p. 38-39)

- **Navigating the Harmonic Series:** Experiment with various strategies to help students develop the technique of moving between notes of the harmonic series. (TE p. 38)
- **My Weekly Practice Cave:** This is an effective way to motivate students to practice at home. Print the form (TE

p. 136), fill in the assignments, including online sound files and/or reading material, photocopy, and distribute. Offer small "rewards" (such as stickers) to students who complete and return them.

- **Practice to Perform!** (TE pg. 34) Keep track of "Make Music!" pieces and improvisations and rehearse in every class, taking time for evaluation and improvement.
- **Progression & Assessment:** Use "Student Self-Evaluation" and "Teacher Assessment" forms (TE p. 129-30) to evaluate progress and set goals.