

**MODULE 6 LESSON GUIDE // U.S. NAVY MUSICIANS**  
**USS CLEVELAND LEGACY FOUNDATION STEAM STARS PROGRAM**

**LESSON OVERVIEW**

This lesson provides an overview of ways the music boosts morale, bridges cultural barriers, and improves skills in the U.S. Navy. The presentation begins with an introduction to career opportunities as a Navy musician, the United States Navy Band, and youth education programs. Students will learn the scientific reasons behind the benefits of music, concluding with an engaging video about community and the Pentatonic Scale, and an interactive team activity. Students will use Google Chrome Music Lab technology to compose a song, then learn to play the song as a team using Boomwhackers. Teams will practice their songs and perform to the class.

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#### LESSON TITLE

# U.S. Navy Musicians

#### TIME

**120 min**      1 class for Presentation and start of Activity  
1 class to finish Activity and Wrap-Up

#### LEARNING OBJECTIVES

Students will:

- Gain an understanding of the many scientific benefits of music.
- Learn about the U.S. Navy Band musicians, and the role they serve in Navy operations.
- Listen to music and see how music is used to tell stories, boost morale, shape perception, and build community.
- Compose and arrange music using technology tools (Chrome Music Lab Song Maker).
- Perform a short composition with others using instruments (Boomwhackers).
- Experience the science of sound, and the physical properties and behavior of sound waves.
- Practice skills in coordinating and communicating to accomplish tasks with a team.

#### NEXT GEN SCIENCE STANDARDS (NGSS)

This lesson helps students prepare for these Next Generation Science Standards Performance Expectations:

MS-ETS1-2. Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.

4-PS3-2: Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents.

4-PS4-1: Develop a model of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move.

#### MATERIALS AND EQUIPMENT LIST

1. Module 6 Presentation (U.S. Navy Musicians)
2. Boomwhackers Composition Activity

Materials needed for each group:

- 1 Set of Boomwhackers (Basic 8 Note C Major Diatonic Scale)

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- Set of Colored Markers or Colored Pencils **ONLY IF** using printed worksheets instead of Song-Maker website

### STUDENT ACTIVITY SHEETS/HANDOUTS

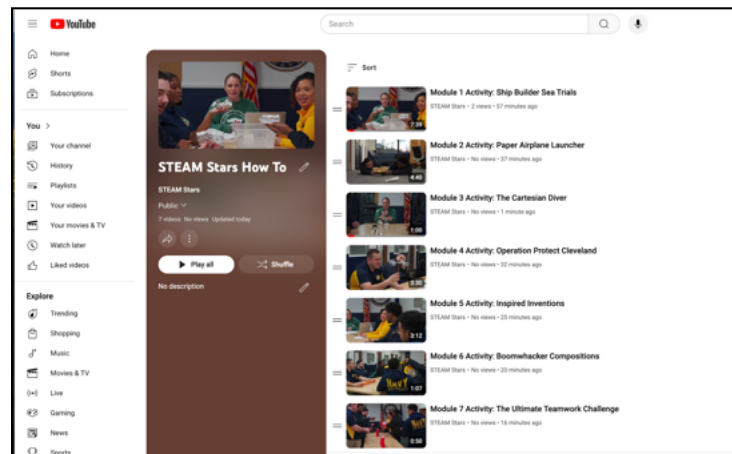
- M6 Student Worksheet **NOTE: Only print if needed.** These are provided as a back-up in case students are not able to access the Song Maker program in class.

### TECHNOLOGY TOOLS

- Digital display projector with internet access
- Ability to project and play Google Slides and YouTube videos with sound
- Printer/Copier
- Access to Smartphone or Computer with Internet and this Webpage:  
<https://musiclab.chromeexperiments.com/Song-Maker/>

### PREP WORK

- Test slide deck, embedded videos.
- Test Google Chrome Music Lab Song Maker [link](#) (you can also just google search: Google Song Maker and it is the top result), and create a song! Play the demo song in the link embedded on Slide 11 (see above).
- Test Boomwhackers on surfaces in your classroom and make note of any concerns or rules for student safety, or any accommodations you'll need to make for the space (clear furniture, clear countertops, allow teams to move into a hallway, etc.).
- IF NOT USING** Google Chrome Music Lab Song Maker, print student worksheets and provide colored markers or pencils (students will only need the colors of the Boomwhackers).
- Go to the [@USSCLF-STEAMStars YouTube](#) to watch helpful How-To videos!


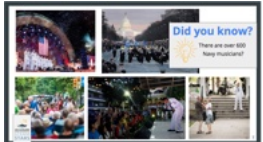




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### PROCEDURE PART 1: PRESENTATION

## Module 6 - U.S. Navy Musicians

<p>Slide 1.</p> 	
<p>Slide 2.</p> 	<p>Did you know there are over 600 musicians in the U.S. Navy today? Musicians are assigned to play in one of the Navy's two Premiere Bands: the United States Navy Band in Washington, D.C. or the Naval Academy Band in Annapolis, MD. They may also perform in one of 11 Navy Fleet bands stationed globally.</p> <p>Musicians set the standard for musical excellence, performing in various musical styles anywhere in the world. Genres range from Broadway to big band, jazz to contemporary rock, country/western to baroque. Their music improves relations with our nation's allies and serves as an important community relations tool. Even within the United States, there are many citizens who may never meet a Sailor, or who may never see a Navy ship in person. And so, Navy musicians bring the spirit of patriotism, service, and goodwill of the Navy to places where ships and Sailors can't always go.</p> <p>Last year, 13 Navy bands completed 7,237 missions, and performed for over 13 million people live and for over 513 million people on television.</p> <p>Let's watch a performance now by The United States Navy Band...</p>
<p>Slide 3.</p> 	<p>(Run time: 4:39)</p>
<p>Slide 4.</p> 	<p>Who you just saw perform was the United States Navy Band, the premier musical organization of the U.S. Navy.</p> <p>Since its inception in 1925, the Navy Band has been entertaining audiences and supporting the Navy with some of the best musicians in the country. 170 enlisted musicians, recruited from the finest music schools and professional musical organizations, perform over 270 public concerts and 1,300 ceremonies each year.</p>





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	<p>Their mission is to provide musical support to the President of the United States, the Department of the Navy, and other senior military and government officials. Through ceremonies, national and regional tours, public concerts, and recordings, the U.S. Navy Band inspires patriotism, enhances Navy awareness and public relations, supports recruiting and retention efforts, preserves the Nation's musical heritage, and projects a positive image at home and abroad.</p> <p>The Navy Band is made up of six performing groups and is capable of playing any style of music in any setting. These groups include:</p> <ul style="list-style-type: none"><li>• Concert - wind ensemble</li><li>• Ceremonial - performs music at official military and government functions</li><li>• Sea Chanters - official chorus</li><li>• Commodores - jazz ensemble</li><li>• Cruisers - pop music group, and</li><li>• Country Current - country-bluegrass ensemble</li></ul> <p>That's right - the Navy even has a country band!</p>
<p>Slide 5.</p> 	<p>The United States Navy Band also has programs dedicated to the education of young musicians. The Music in the Schools program brings their award winning band members to run clinics, master classes and recitals at local schools. And every spring, the Concert Band hosts their annual Young Artist Solo Competition for 9th-12th graders. Winners receive cash prizes as well as opportunities to play with prestigious orchestras around the world. Past winners include an oboe player from Beachwood High School in Cleveland (pictured lower left), who is an accomplished concert oboist to this day!</p> <p>The United States Navy Band brings together musicians from across the world, and they inspire patriotism and preserve the nation's musical heritage whether they are performing at Carnegie Hall, the White House, or in cities and schools like ours.</p>
<p>Slide 6.</p> 	<p>Why is music important to the Navy? Let's look at some of the scientific benefits of music...</p> <p>1. Music increases contact, coordination, and cooperation with others</p> <p><b>How many of you have been to a concert before?</b> Music is a powerful force that draws people out of their shells, and into community. You can be standing next to a stranger, and feel like they're a friend, because you both like the same music, or know all the words to the same song. Isn't that a neat thought?</p> <p><b>How many of you take band, or are in a band?</b> Can you just show up and play without practicing together? Not usually. Every band member has a different part, a different instrument, right? It wouldn't sound very good if you didn't work together, trust each other to do your part. This aligns with the Navy's</p>


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	<p>values, because everyone has a team that they work with and rely on. And just like music, when people are all doing their part and can trust each other, the result will be something really good!</p>
<p>Slide 7.</p> 	<p>2. Music makes us happy</p> <p>Quite literally, listening to music has been found to release certain chemicals in the brain – hormones related to positive, happy feelings. Research shows that Dopamine, a “feel-good hormone,” is released every time you listen to music you like. Listening to music with someone else can also release prolactin, a hormone that bonds people together. Singing for half an hour significantly increases oxytocin levels, with singers feeling more elated and energetic after a session. And if you sing together? The oxytocin also generates feelings of trust in one another.</p> <p>The Navy has discovered that music is a way to boost morale for Sailors, Americans, and all around the world. And Navy musicians say their favorite part of the job is performing and seeing the joy it brings to audiences wherever they go!</p>
<p>Slide 8.</p> 	<p>3. Music strengthens empathy</p> <p>Music has been shown to activate many areas of the brain, including the circuit that helps us to understand what others are thinking and feeling, and to predict how they might behave—a social skill scientists call “theory of mind,” which is linked to empathy. Navy leaders look at empathy as a great asset, enabling and enhancing one’s ability to understand, inspire, motivate, and communicate.</p>
<p>Slide 9.</p> 	<p>4. Music increases cultural cohesion</p> <p>It’s said that music is a universal language. But it’s really something that transcends language. Music connects people across cultures. Why is that?</p> <p>Music is a way to communicate beyond words. Our brains are wired for it from birth. Research has shown that in all cultures, one of the first ways mother and child communicates is using the pentatonic scale—these are the notes we see in lullabies. And it’s used in traditional music around the globe.</p> <p>Let’s watch a video to learn more about this neurological phenomenon. Then we’ll dive into our activity!</p>
<p>Slide 10.</p> 	<p>(Run time: 2:42)</p>

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<p>Slide 11.</p>  A slide titled "BOOMWHACKER COMPOSITIONS" with musical notes and a treble clef. It includes a "STEAM-BRAND" logo and a "COURTESY OF THE CHROME MUSIC LAB" logo.	<p>For our activity, we'll be working in teams to compose a song, and then you'll be playing it together! Your instruments are these Boomwhackers. (Demonstrate for the class.)</p> <p>You'll use Chrome Music Lab to compose your song using a simple one octave scale. Then you'll get a chance to perform your song for the class.</p>
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### PROCEDURE PART 2: ACTIVITY

## Boomwhacker Compositions

Adapted from A Sound Mind <https://asoundmind.edublogs.org/2019/05/16/chrome-music-lab-boomwhacker-compositions/>

*Pass out Student Worksheets if needed. Instruct students to use colored markers or pencils (not provided) to "record" their song composition for their performance later.*

For students with Smartphones or Computers with internet access:

Direct students to <https://musiclab.chromeexperiments.com/Song-Maker/> (or google search: Google Song Maker) to pull up the song maker program. They will not need to set up a login to use the program or save the link to access their song.

Click on the link to open and play the sample song (Mary Had a Little Lamb):

<https://musiclab.chromeexperiments.com/Song-Maker/song/6345698748661760>

Invite students to come up to play along with the Boomwhackers.

- Give each student a boomwhacker (or two, one in each hand).
- Have them practice a bit by "whacking" on a table or their thigh.
- Play along to the music by whacking the same color boomwhacker to the song.
- Try once or twice, but don't worry if it isn't perfect. Just demonstrate so they get the idea.
- You can slow down the tempo as well to make it easier.



Divide class into teams. Distribute one set of Boomwhackers for each team. Spread teams out so they can practice, and make sure at least one from each team is able to record/compose the song on Song Maker that the team produces together. Advise students to start out with a simple song (1 note melodies). Watch what a practice session would look like [here](#).

**IMPORTANT NOTE:** Inform teams that they may need to adjust the settings in Song Maker to 1 octave since they only have 8 notes (8 Boomwhackers) to work with! Check the settings to make sure they are set to 1 Octave with High C Note. Advise them to test their Boomwhackers to make sure it sounds right before they get too far into the process!

Let students know that they can work independently on their compositions if they choose, but each team will only be allowed to perform one piece. In Song Maker, students will need to copy and save the link to their song for reference when they perform. Instruct them to email their final songs to you so you can project it in front of the class.

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#### **\*\* OPTION TO BREAK THE LESSON UP INTO TWO PERIODS \*\***

In the first period, students will be led through the presentation, demonstration, break into teams, play with Song Maker, save their song composition, and practice with the Boomwhackers. In the second period, teams will have 20-30 minutes to finish practicing their songs. The remainder of the time will be for performances.

If you are able to project the song maker compositions on screen in front of the class, test the links and audio in advance of the Performances. Otherwise, have a computer screen large enough set up for teams to be able to watch Song Maker and read the notes to play along from as they perform the song together in front of the class.

When there are 30 minutes left in the period, stop practices and begin performances. Allow a second attempt if needed per team. Applaud all teams for their creativity, coordination, and teamwork!