



Working in Harmony

Working in Harmony allows students to discover how STEAM skills come to life, featuring the diverse careers and people who create Country Music together. Inspire your students to follow their passion and embrace innovative thinking through dynamic collaboration, as you step behind the scenes of Country Music with your all-access pass to learning!

ABOUT THE VIDEO TOPIC SERIES

"Anatomy of a Hit Song" is a three-part video topic series for students in grades 3–8 that examines all the elements that make a Country Music song popular and memorable. Like the people and groups that put together a performance or concert, this series will allow teachers to work with their colleagues to create cross-curricular connections. Embedded in the videos are lessons in Science, Technology, Engineering, Arts, and Math. Although you could do it as a solo artist in your subject field, collaborating with other educators will add to the fun and excitement. Consider collaboration with your school's music teacher, if you have one, to add a new level of interest for the students and some real-world application. Organize your "band" and play!

USING THE VIDEOS IN YOUR CLASSROOM

The videos in this three-part topic series can be used in a variety of ways, depending on the needs of your students and device access. They were designed with flexibility in mind, and can be used in any order, or even independently! Although, we recommend collaborating with other educators to really make the magic happen.

Watch and Discuss

Watch one or more of the videos in class or assign students to watch independently. Invite students to participate in a follow-up discussion and/or written assignments. Use the discussion and research questions provided for each video or create your own.

Classroom Activity

Each video has an accompanying classroom activity aligned to national standards. The video is an integral part of each activity, which also includes objectives, standards, career connections, and detailed implementation strategies. Instruction is divided into the following sections:

- **Engage:** An opening activity or discussion that captures students' interest in each topic area.
- **Learn:** Discover the topics that connect directly to national standards.
- **Career Connection:** Access industry professionals who drive home real-world connections into the classroom.
- **Challenge:** Students apply their learning in a collaborative and dynamic activity.
- **Reflect:** Encourage students to consider their learning, the connections they made, and feedback, or think of how to take their learning further.

CONNECTING WITH A MUSIC TEACHER

Music teachers are highly creative individuals, but like all teachers, they are busy people. In the Music Lesson Extension section, there are ideas to either invite the music teacher to collaborate with you or to expand learning further through music education. Music is a universal language that brings people together for a common feeling or purpose; these videos are a great way to start collaborating with your colleagues while making real-world connections to the music industry.

LESSON 1

Connects to Video 1 | The Musician

Rhythm and Ratios

OBJECTIVES

Students will be able to:

- **Explore** how ratios translate into musical expressions.
- **Create** musical patterns using different ratios.
- **Apply** knowledge learned about ratios to layer patterns and build rhythms using a digital sequencing program like GarageBand or Audacity.

OVERVIEW

This segment centers on Hubert Payne, the drummer for Country Music superstar group Little Big Town. He describes how he uses his talents to help craft the rhythms that bring their songs to life. The rhythm and beat of a song are often the driving forces behind a song's success, and they can be broken down into simple mathematical relationships. This activity gives students the opportunity to create their own digital rhythms using ratios as building blocks. They will layer patterns of sound in a digital audio mixing program to produce a unique rhythm.

Take this activity further by having students experiment with the audio mixing software. They can manipulate their rhythm tracks by balancing and equalizing the different levels of sound.

KEY STUDENT QUESTIONS

- How do musicians use ratios and repetition to create interesting and catchy rhythms?
- How does math relate to rhythm?
- What is "common" time and why is it so popular across different genres of music?
- What is the rhythm section of a band and what role do they play?

CAREER CONNECTION—HUBERT PAYNE

Students will hear from Hubert Payne, the touring and recording drummer for the hugely successful band Little Big Town. He explains his musical process and how he uses his skills to give each song a special rhythm and feel.

TEAM SKILLS PRACTICED

Communication, problem-solving, organization, teamwork, and creativity.

MUSICAL LESSON EXTENSIONS

If you can access a great music teacher, invite him or her to work with you on extending the lesson. If you do not have a music teacher available, here are some ideas for how you could expand learning and further embed music education into your classroom:

- **Create a Rhythm Band:** Divide the class into smaller groups, each one responsible for a specific set of instruments (drums, shakers, etc.). Instruct them to create complementary rhythmic patterns, and then have the groups perform together. This collaborative activity reinforces teamwork and listening skills.
- **Guest Musicians or Demonstrations:** Bring in guest musicians, such as a drummer or percussionist, to demonstrate various rhythmic patterns and techniques. This provides students with real-world examples and a chance to see and hear professional musicians in action.
- **Rhythmic Storytelling:** Combine language arts with music by having students create rhythmic stories. They can use words, claps, or other percussive sounds to represent different characters or events in their stories. This interdisciplinary approach fosters creativity and language development.

LESSON 2

Connects to Video 2 | The Music Producer

Remixes and Remakes

OBJECTIVES

Students will be able to:

- **Research** popular remakes and remixes to determine which elements of the original were retained in the new version.
- **Analyze** the elements of a hit song, including the lyrics, beat, and rhythm.
- **Create** an infographic to communicate their theories of what makes the song a hit and their plan for remaking it.
- **Remake** a popular song for a different genre or to express a new feel, vision, or purpose.

OVERVIEW

What do the famous songs "Hurt," "Pretty Woman," and "I Will Always Love You" have in common? They are all hits that were remade into popular songs of different genres. What can turn a rock ballad into a soulful country chart-topper? How can a solo love song be rearranged to showcase the talents of a quartet? In this activity, students will explore how music producers reimagine hit songs and remix them into something entirely new. Then they will work in groups to create their own song remake.

This activity ties into "Anatomy of a Hit Song: The Music Producer," where Discovery Education meets up with the guitarist and Country Music producer, Derek Wells. In this video, students will learn how music producers collaborate with musicians to help them bring their artistic visions to life. Creating a hit song involves more than just the artist's music and lyrics. Music producers build teams of sound engineers, musicians, and background singers to work creatively together to make beautiful music that conveys the tone and message the artist wants.

KEY STUDENT QUESTIONS

- How do music producers identify the elements of a hit song that make it popular and reshape them into something unique and new?
- What is the most important or defining element of a song: the lyrics? The melody? The rhythm?
- How do you think artists view covers or remakes of their work?
- What makes one version of a song "better" than another?
- How does the music producer impact the overall feel and impact of the song?

CAREER CONNECTION | DEREK WELLS

Derek Wells is a music producer and guitarist who has worked with many big names in Country Music and is credited with over 100 number-one singles. In this video segment, he describes the music producer's role in the collaborative process and how he helps bring an artist's vision to life.

TEAM SKILLS PRACTICED

Listening, problem-solving, organization, teamwork, incorporating feedback, and creativity.

MUSICAL LESSON EXTENSIONS

If you have access to a great music teacher, invite him or her to work with you on extending the lesson. If you do not have a music teacher available, here are some ideas for how you could expand learning and further embed music education into your classroom:

- **Cover Song Performance:** Organize a school-wide showcase where students perform cover versions of famous songs. They can rearrange the instrumentation, tempo, or style while maintaining the essence of the original. This activity promotes collaboration, musical expression, and performance skills.
- **Lyrics vs. Melody Debate:** Divide the class into two groups and initiate a debate on whether melody or lyrics are more crucial in a song. Encourage students to present arguments supporting their chosen element. This activity stimulates critical thinking and helps students articulate their opinions about the components that make a song impactful.
- **Guest Speaker:** Invite a songwriter, composer, or musician who has experience in creating covers or remixes to speak to the class. They can share insights into their creative process, decision-making, and how they balance melody and lyrics when reinterpreting a song.
- **Remix Bracket Polling:** Select several songs that have been covered by multiple artists and have students compare various versions. Pit the originals against the covers in a school-wide, bracket-style poll. Students can vote on which version they like best and decide once and for all if the originals or the covers are usually the best.

LESSON 3

Connects to Video 3 | The Sound Engineer

Making Waves: The Science of Sound

OBJECTIVES

Students will be able to:

- **Identify** the parts of a soundwave.
- **Build** a prototype of a microphone isolation shield or studio box.
- **Test** different acoustic materials to see how they impact the sound quality of a recording.

OVERVIEW

The CMA Topic Series allows students to receive a behind-the-scenes look at the inner workings of a studio recording session. Sound engineers are responsible for recording the musician's work and making sure the artist's vision is expressed in the audio track. They must understand how sound works and use studio equipment to record, layer, and manipulate sound to create a hit song. This activity gives students the opportunity to learn about sound waves and how the materials and layout of a recording studio can impact the quality of a recording.

Drawing on what they have learned in the video topic series, students will explore how sound travels through different materials. They will build a prototype of a microphone isolation shield or studio box and test out different materials to see which absorbs sound best.

Students will test out different materials for their microphone shields by making short recordings and comparing them. They will listen for ambient noise from the classroom and echoes to determine which material works best. Experiment further by standing different distances from the microphone and determining how that affects the quality of the sound.

KEY STUDENT QUESTIONS

- How can students use their knowledge of sound waves to design a microphone isolation shield to produce the best studio sound?
- How does sound travel?
- What are sound waves and how can they differ from each other?
- How important are acoustic materials in a recording studio?
- What different skills and talents does each member of the group bring to the project?

CAREER CONNECTION | RACHAEL MOORE

Tennessee-based sound engineer Rachael Moore is highlighted in this video segment. She discusses how she uses her scientific and technical knowledge of how sound travels to execute the recording artist's vision and translate audio into a digital recording.

TEAM SKILLS PRACTICED

Problem-solving, planning, teamwork, delegating tasks, incorporating feedback, and creativity.

MUSICAL LESSON EXTENSIONS

If you can access a great music teacher, invite them to work with you on extending the lesson. If you do not have a music teacher available, here are some ideas for how you could expand learning and further embed music education into your classroom:

- **Build a Simple Instrument:** In the Family Activity, students will work with their families to build homemade wind chimes. For this activity, have students experiment and create different musical instruments, such as rubber band guitars, water glass xylophones, or straw pan flutes. This hands-on activity allows them to observe and manipulate different materials to produce sound, connecting the creation of sound to the physical properties of objects.
- **Acoustic Experiments:** Set up acoustic experiments in the classroom. For example, explore how sound travels through different materials by placing objects in the path of a sound source. Discuss the concepts of absorption, reflection, and transmission of sound waves.
- **Analyze Studio Recordings:** Listen to professional studio recordings as a class and analyze the production choices. Discuss how effects like reverb, echo, and equalization impact the overall sound. This helps students understand the role of post-production in shaping the final product.
- **Recording Project:** Organize a class recording project where students record their musical performances or compositions. Discuss the importance of microphone placement, room acoustics, and the use of different recording techniques to capture specific sounds. This project allows students to apply theoretical knowledge to practical situations.
- **Frequency and Pitch Exploration:** Conduct activities that explore the relationship between frequency and pitch. Use tuning forks, pitch pipes, or online tools to demonstrate how changing the frequency of a sound wave alters the pitch. Students can experiment with creating sounds at different frequencies using everyday objects.

FAMILY ACTIVITY

Homemade Wind Chimes

OBJECTIVES

Students will work with their families at home to:

- **Explore** different materials and sizes of objects to determine what sounds they produce.
- **Create** a wind chime to demonstrate their understanding of sound waves.

OVERVIEW

Whether it is the intricate notes played by an expert guitarist or a toddler banging on pots and pans, all sound travels to our ears as a wave. The length and frequency of the sound waves produce different pitches. Shorter waves produce higher pitches and longer waves produce lower pitches. But music doesn't have to be created by expensive instruments. In fact, country and bluegrass music has its roots in homemade instruments. Beautiful music can come from the most common everyday objects. In this activity, students will use what they know about vibrations and sound waves to create a wind chime from found objects.

Students and their families can experiment with different materials to create their wind chimes, like PVC pipe, paper towel rolls, or plastic bottles. They will see what sounds are produced with various materials. Changing the size of the materials also affects the sound, and students will use their knowledge of ratios to relate the size of the object to the pitch of the sound. Families can choose the materials that they can find to make the most pleasing sounds and turn them into a wind chime that will add beautiful music to their home.

KEY STUDENT QUESTIONS

- How do the types and sizes of materials used in making a wind chime affect the pitch of sound produced?
- How is a sound created?
- What's the connection between mathematics and different musical notes?