Secondary 2
Turn It Up: Amplifying Guitars

Dr. Sarah Gulish

Grade Level/Class

Lower Secondary 50-Minute Music Class
Cross-Curricular: STEAM/Acoustics

Overall Theme

By the 1920s, the big band craze had driven many ensembles to be larger and louder than what even the loudest acoustic guitars could keep up with. Luthiers and engineers experimented with electricity to determine what this then-new technology could do to add volume.

Essential Questions

1. How has instrument technology changed to accompany volume demands?
2. How are electric guitars amplified?
3. How did the development of the pickup change the trajectory of guitar manufacturing?

National Standards

Connect

MU: Cn11.1.7.a - Demonstrate understanding of relationships between music and the other arts, other disciplines, varied contexts, and daily life.

Student Learning Outcomes

By the end of this lesson, students will be able to:

1. Define pickup, amplification, and electricity.
2. Identify the societal factors leading to the need for amplification.
3. Compare various makes and models of guitars on visual and aural differences.
4. Identify amplification preferences for self-selected artists.

Materials Needed

1. S2 Presentation
2. S2 Worksheet
3. Writing Utensil
4. Five-minute timer (digital timer included in presentation)

Procedures

Lesson Introduction (10 Min):

- Teacher (T) assigns students to small groups to complete a quick-fire brainstorming session.

- T tells Students (S) that they will be working together for five minutes to answer one question and can use drawings or words to complete their answer.
- T puts the introductory question on the board: *"How does an electric guitar work?"* and sets a timer for five minutes.
- At the end of the five minutes, S take turns sharing the work from their group.
- T notes their answers, pointing out instances of the use of the essential vocabulary words: "pickup," "amplification," and "electricity."
- T tells students that this lesson will be focused on the development of the electric guitar and how it became essential to the music industry.

Lesson Activity (30 Min):

- The Whole Class (WC) watches two minutes of the Lionel Loueke video and S answers the questions on their worksheet:
    - How would you describe the sound of this guitar?
    - How would you describe the look of this guitar?
    - How would you describe the amplifier and any other equipment in this space?
- WC watches the video of Jackie Venson and answers the same questions.
- T leads the WC in a discussion on how and why electric guitars and amplifiers were developed, using the slideshow to highlight key points in history: (Note: Please refer to notes in the presentation):
    - Key ideas: Development of the pickup, creation of amplifiers, expansion of new shapes.
        - An early electric guitar example: The "Frying Pan" electric guitar and the need for instruments louder than an acoustic guitar.
        - Show photos of electric guitars in the Museum of Making Music and share a video of electric guitars being built in a factory.
    - The bundling of amplifiers with guitars.
        - Show a photo of the amplifiers in the Museum of Making Music.
        - Watch a video of amplifiers being built.
    - Experimenting with body shapes.
        - Show photos of various guitar shapes.
- T shares clips from the oral histories.
- T invites S to spend 5-10 minutes researching guitarists from a band/artist they listen to and answer the questions on their worksheet:
    - What type of guitar do they play?
    - Who are they inspired by?
    - What type of amplifier do they use?
    - How would you categorize their sound?

Assessment Strategies

Wrap-up and Assessment (10 Min):

Invite S to return to their small groups and edit their initial worksheet based on new information they received during the class period. S answers the exit ticket *"What is one new thing you learned today?"*

Extensions/Adaptations

- This Lesson Plan has so many possibilities for cross-curricular instruction:
  - STEAM: Look into the engineering of specific elements from this lesson, like electric guitars or amplifiers.
  - Acoustics: Perform an experiment looking at the DB levels of different types of instruments, both acoustic and electric.
  - Music Performance: Experiment with electric guitars in the classroom! What happens if you use different instruments? Amplifiers? Pedals?
- When working with small groups, consider doing all of the activities as a group.
- Consider providing simplified questionnaires with visual aids for ELL students.
- Provide alternative assignment options for students with fine motor skill considerations. For example, they could dictate answers or draw on a tablet.
- Use closed captions for videos, and allow text-to-speech for any required readings.
- Allow students to use speech-to-text to dictate their answers rather than writing.
- Share definition cards for the essential vocabulary of "pickup," "amplification," and "electricity" to help students use them in their answers.
- Provide students with choices on their worksheets to guide their thinking.
- Share a checklist to aid students in their independent research time (for example: look at guitar oral histories in the highlighted pink section to answer question one).

Spotlight on Careers in Music

This lesson plan can be tied to specific careers in music:

- Luthier
- Instrument Manufacturer
- Singer/Songwriter
- Guitar Tech
- Guitar Repairperson
- Sound Engineer (stage)
- Stage Manager
- Acoustic Engineers
- Roadie
- Production Design
- Lighting Design
- Artist Relations

For comprehensive information on careers in the music industry, please visit Consider a Career in Music