

Unit 1: Fundamentals of Live Audio Production

Content Area: **Fine and Performing Arts**
Course(s): **Music Tech III**
Time Period: **September**
Length: **1**
Status: **Published**

Unit Overview:

- This unit is extensive and provides students with the fundamentals of setting up a live audio production. This includes learning the components of a public address (PA) system, the ins and outs of microphones, how they work, their unique applications, and how to properly place microphones for the best sonic results. The unit also includes lessons on careers in live audio production and an opportunity to begin working in live audio production through a Structured Learning Experience (SLE) at the high school.

Enduring Understandings:

- Different microphones have different, though not exclusive, applications.
- Selecting the correct equipment for a performance or recording has implications beyond simply what people hear.

Essential Questions:

- How can your decisions on equipment impact the signal chain, and in turn, the performance?
- Why is it important to know about the different types of microphones in a live audio environment?

Standards/Indicators/Student Learning Objectives (SLOs):

MU.9-12.1.3B.12prof.Cn10	Synthesizing and relating knowledge and personal experiences to create products.
MU.9-12.1.3B.12prof.Cn10a	Demonstrate how interests, knowledge, and skills relate to personal choices and intent when creating, performing, and responding to music.

Lesson Titles:

- 1. Types of Microphones
- 2. Placements
- 3. The Signal Chain
- 4. Cables and Connections
- 5. Must Have Mics for Every Budget

Career Readiness, Life Literacies, & Key Skills

TECH.9.4.12.CI.1	Demonstrate the ability to reflect, analyze, and use creative skills and ideas (e.g., 1.1.12prof.CR3a).
TECH.9.4.12.CI.2	Identify career pathways that highlight personal talents, skills, and abilities (e.g., 1.4.12prof.CR2b, 2.2.12.LF.8).
TECH.9.4.12.CI.3	Investigate new challenges and opportunities for personal growth, advancement, and transition (e.g., 2.1.12.PGD.1).

Inter-Disciplinary Connections:

Equity Considerations

Asian American Pacific Islander Mandate

Topic: Discrimination towards AAPI in Music field

Materials Used: <https://www.theatreartlife.com/lifestyle/life-in-the-less-than-5-being-an-asian-american-sound-tech/>

Addresses the Following Component of the Mandate:

- Economic
- Political
- Social

Holocaust Mandate

Topic: Gender inequality in music

Materials Used: <https://www.rollingstone.com/culture-council/articles/leaders-address-gender-inequality-music-industry-1252067/>

Addresses the Following Component of the Mandate:

- Bias
- Bigotry
- Bullying
- Holocaust Studies
- Prejudice

Climate Change

Topic: Scientists and musicians working against climate change

Materials Used: <https://news.mit.edu/2021/scientists-musicians-climate-change-1201>

Addresses the Following Component of the Mandate:

- Economic
- Political
- Social

LGBTQ And Disabilities Mandate

Topic: Disabilities in the music workplace

Materials Used: <https://edm.com/industry/disabled-music-industry-professionals-fear-of-discrimination>

Addresses the Following Component of the Mandate:

- Economic
- Political
- Social

Instructional Strategies, Learning Activities, and Levels of Blooms/DOK:

- Students will be required to explain their equipment selections (level 2) and compare them to that of the demonstration and their classmates (level 3) during their microphone array design (level 4).
- Levels 2-4 of the DOK chart will be used.

Modifications

ELL Modifications:

- Choice of test format (multiple-choice, essay, true-false)
 - Continue practicing vocabulary
 - Provide study guides prior to tests
 - Read directions to the student
 - Read test passages aloud (for comprehension assessment)
 - Vary test formats
-
- Work with case workers and foreign language teachers to produce content students are comfortable with

IEP & 504 Modifications:

- Allow for redos/retakes
- Assign fewer problems at one time (e.g., assign only odds or evens)
- Differentiated center-based small group instruction
- Extra time on assessments
- Highlight key directions
- If a manipulative is used during instruction, allow its use on a test
- Opportunities for cooperative partner work
- Provide reteach pages if necessary
- Provide several ways to solve a problem if possible
- Provide visual aids and anchor charts
- Test in alternative site
- Tiered lessons and assignments
- Use of a graphic organizer
- Use of concrete materials and objects (manipulatives)
- Use of word processor

G&T Modifications:

- Alternate assignments/enrichment assignments
- Enrichment projects
- Extension activities
- Higher-level cooperative learning activities
- Pairing direct instruction with coaching to promote self-directed learning
- Provide higher-order questioning and discussion opportunities
- Provide texts at a higher reading level
- Tiered assignments
- Tiered centers

At Risk Modifications

- Additional time for assignments
- Adjusted assignment timelines
- Agenda book and checklists
- Answers to be dictated
- Assistance in maintaining uncluttered space
- Books on tape
- Concrete examples
- Extra visual and verbal cues and prompts
- Follow a routine/schedule
- Graphic organizers
- Have students restate information
- No penalty for spelling errors or sloppy handwriting
- Peer or scribe note-taking
- Personalized examples
- Preferential seating
- Provision of notes or outlines
- Reduction of distractions
- Review of directions
- Review sessions
- Space for movement or breaks
- Support auditory presentations with visuals
- Teach time management skills
- Use of a study carrel
- Use of mnemonics
- Varied reinforcement procedures
- Work in progress check

Alternative Assessments

Performance tasks

Project-based assignments

Problem-based assignments

Presentations

Reflective pieces

Concept maps

Case-based scenarios

Portfolios

Benchmark Assessments

Skills-based assessment

Reading response

Writing prompt

Lab practical

Formative Assessment:

Exit tickets

Questioning

Assignments

Summative Assessment:

- Students will complete a microphone array setup of their design, using microphones selected based on application. Both a written and performance assessment will be provided.

Resources & Materials:

- Guest Speakers/Industry Professionals
- MikTek Drumset Microphone kit
- SAE Mackie Simulator
- Shure SM-57
- Shure SM-58
- Soundcheck Pro

Technology:

- Google Classroom
- Telefunken Immersive Studio
- Cambridge Multi-track library
- Google Slides
- Telefunken Multi-track library

TECH.8.1.12

Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.

TECH.8.1.12.A.CS1

Understand and use technology systems.