2025 Unit 10: Music Technology and Digital Musicianship

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Music Technology and Digital Musicianship

This unit fosters students' and artists' musical computer literacy by developing proficiency with a range of technologies integral to modern music practice. Students will use technology to enhance their knowledge in music theory, history, and ear training, and produce publisher-quality printed music. They will explore techniques for playing electronic keyboards, including MIDI, and utilize music sequencing for composition and arrangement. The unit also covers basic Digital Audio Workstation (DAW) operation, recording studio setup, and sound system management. Additionally, students will learn stage setup and operation of microphones, amplifiers, and instruments to support live performances, integrating technology seamlessly into their musicianship.

Learning Objectives

• Students and artists will develop musical computer literacy by increasing their comfort and proficiency with available technology.

• Students will correctly demonstrate, perform, identify, discuss, analyze, compare, draw, recognize, spell, transcribe, transpose, and compose research focused on the history and profession of music.

• Students will correctly demonstrate, perform, identify, discuss, analyze, compare, draw, recognize, spell, transcribe, transpose, and compose using music sequencing as a tool for composition and arrangement.

• Students will correctly demonstrate, perform, identify, discuss, analyze, compare, draw, recognize, spell, transcribe, transpose, and compose using specific techniques for playing the piano or other electronic musical keyboards (including MIDI).

• Students will correctly use available technology to demonstrate, perform, identify, discuss, analyze, compare, draw, recognize, spell, transcribe, transpose, and compose to improve their knowledge and skills in music theory, music history, and ear training.

• Students will learn to create audio recordings for self and peer review, as well as for inclusion in a digital portfolio.

• Students will learn to set up a performance stage and correctly operate microphones, amplifiers, instruments, and related audio equipment to support live music performances.

• Students will understand and use a Digital Audio Workstation (DAW) at a basic level, and learn how to set up a recording studio and sound system.

• Students will use available technology to demonstrate, perform, identify, discuss, analyze, compare, draw, recognize, spell, transcribe, transpose, and compose written music using printing techniques at a publisher's quality level.

Essential Skills

- Analyze and discuss music theory, history, and ear training concepts using digital tools to enhance learning and application.

- Assemble and configure a recording studio environment, including sound systems and audio equipment for optimal sound capture.

- Conduct research on music history and professions using digital resources, synthesizing findings into presentations or reports.

- Create high-quality audio recordings for self-assessment, peer feedback, and portfolio development.

- Demonstrate proficiency in digital music notation, producing publisher-quality printed music.

- Navigate and operate various music technology tools confidently, including notation software, DAWs, and music sequencing programs.

- Perform and compose music using electronic keyboards and MIDI controllers with correct technique and integration.

- Plan and execute live performance setups, managing microphones, amplifiers, instruments, and audio gear efficiently.

- Set up and operate a Digital Audio Workstation (DAW) for basic recording, editing, and mixing tasks.

- Utilize music sequencing software effectively to compose, arrange, and edit musical works.

Standards

MU.9-12.1.3E.12prof.Cr1a	Generate melodic, rhythmic and harmonic ideas for compositions or improvisations using digital tools.
MU.9-12.1.3E.12prof.Cr3a	Drawing on feedback from teachers and peers, develop and implement strategies to improve and refine the technical and expressive aspects of draft compositions and improvisations.
MU.9-12.1.3E.12prof.Cr3b	Share compositions or improvisations that demonstrate musical and technological craftsmanship as well as the use of digital tools and resources in developing and organizing musical ideas.
MU.9-12.1.3E.12prof.Pr4a	Develop and explain the criteria used for selecting varied sound resources based on interest, music reading skills, and an understanding of the performer's musical and technological skill.
MU.9-12.1.3E.12prof.Pr4b	Describe how context, structural aspects of the music, and digital media/tools inform prepared and improvised performances.
MU.9-12.1.3E.12prof.Pr4c	Identify the context, expressive challenges, and use of digital tools in a varied repertoire of music influence prepared or improvised performances.
MU.9-12.1.3E.12prof.Pr5a	Identify and implement rehearsal strategies to improve the technical and expressive aspects of prepared and improvised performances in a varied repertoire of music.
MU.9-12.1.3E.12prof.Pr6a	Using digital tools, demonstrate attention to technical accuracy and expressive qualities in prepared and improvised performances of a varied repertoire of music.
MU.9-12.1.3E.12prof.Pr6b	Demonstrate an understanding of the context of music through prepared and improvised performances.
MU.K-12.1.3C.12nov.Re7a	Identify reasons for selecting music based on characteristics found in the music, connection to interest, and purpose or context.
MU.9-12.1.3E.12prof.Re7a	Cite reasons for choosing music based on the use of the elements of music, digital and electronic aspects, and connections to interest or purpose.
MU.9-12.1.3E.12prof.Re7b	Explain how knowledge of the structure (e.g., repetition, similarities, contrasts),

	technological aspects, and purpose of the music informs the response.
MU.K-12.1.3C.12nov.Re7b	Identify how knowledge of context and the use of repetition, similarities and contrasts inform the response to music.
MU.9-12.1.3E.12prof.Re8a	Explain and support an interpretation of the expressive intent of musical selections based on treatment of the elements of music, digital and electronic features, and purpose.
MU.9-12.1.3E.12prof.Re9a	Evaluate music using criteria based on analysis, interpretation, digital and electronic features, and personal interests.
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.
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.
MU.9-12.1.3B.12prof.Cn11a	Demonstrate understanding of relationships between music and the other arts, other disciplines, varied contexts and daily life.
MU.9-12.1.3B.12prof.Cn11a	Demonstrate understanding of relationships between music and the other arts, other disciplines, varied contexts, and daily life.

Instructional Tasks/Activities

1. **Technology Orientation:** Introduce students to key music software and hardware, including notation programs, DAWs, and MIDI keyboards.

2. **Digital Notation Practice:** Have students create, edit, and print music scores using notation software, focusing on publisher-quality output.

3. **Keyboard Technique Workshops:** Guide students through proper playing techniques on electronic keyboards and MIDI controllers.

4. **Sequencing Exercises:** Assign composition and arrangement tasks using music sequencing software to build familiarity and creativity.

5. **Research Projects:** Students research a music genre, era, or professional role using online resources and present findings digitally.

6. **DAW Setup Demonstrations:** Teach students how to set up a DAW session, including track creation, input/output routing, and basic editing.

7. **Recording Studio Setup:** Hands-on activity where students set up microphones, audio interfaces, and instruments for recording.

8. **Live Sound Practice:** Simulate live performance setups, having students manage microphones, amplifiers, and audio mixers.

9. **Audio Recording Projects:** Students record solos or ensembles, then review and critique recordings individually or in groups.

10. **Portfolio Development:** Guide students in compiling recordings, compositions, and notation projects into digital portfolios.

11. **Ear Training with Technology:** Use apps or software to practice interval recognition, rhythm exercises, and melodic dictation.

12. **Peer Feedback Sessions:** Facilitate structured peer review where students provide constructive feedback on digital compositions and recordings.

- Audio Recording Projects
- DAW Setup Demonstrations
- Digital Notation Practice
- Ear Training with Technology
- Keyboard Technique Workshops
- Live Sound Practice
- Peer Feedback Sessions
- Portfolio Development
- Recording Studio Setup
- Research Projects
- Sequencing Exercises
- Technology Orientation

Assessment Procedure

- classwork/homework
- discussions
- participation in performance
- peer observation
- Teacher observation
- tests/quizzes

Recommended Technology Activities

- Appropriate Content Specific Online Resource
- Chromebook
- Google Classroom
- Google Forms
- Google Slides
- handouts
- Kahoot
- LogicPro
- MagicSchool AI
- Other- Specified in Lesson
- Pro Tools
- Quiziz
- School studio
- Screencastify

Accommodations & Modifications & Differentiation

Accommodations and Modifications should be used to meet individual needs. Their IEP and 504 plans should be used in addition to the following suggestions.

Gifted and Talented

- Compare & Contrast
- Conferencing
- Debates
- Jigsaw
- Peer Partner Learning
- Problem Solving
- Structured Controversy
- Think, Pair, Share
- Tutorial Groups

Instruction/Materials

- alter format of materials (type/highlight, etc.)
- color code materials
- eliminate answers
- extended time
- extended time
- large print
- modified quiz
- modified test
- Modify Assignments as Needed
- Modify/Repeat/Model directions
- necessary assignments only
- Other (specify in plans)
- other- named in lesson
- provide assistance and cues for transitions
- provide daily assignment list
- read class materials orally
- reduce work load
- shorten assignments
- study guide/outline

- utilize multi-sensory modes to reinforce instruction

Environment

- alter physical room environment
- assign peer tutors/work buddies/note takers
- assign preferential seating
- individualized instruction/small group
- modify student schedule (Describe)
- other- please specify in plans
- provide desktop list/formula

Honors Modifications

Resources

- instruments
- Noteflight
- SoundTrap
- College audition requirements
- Etudes
- Google Classroom
- handouts
- MusicFirst
- screen recordings
- The internet
- Theory texts
- Tonesavvy
- virtual instruments
- whiteboard