

**Course: Tech in Music II**  
**Unit #4: Sound Manipulation**

**Year of Implementation: 2019-2020**

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### **Stage One - Desired Results**

**Link(s) to New Jersey Student Learning Standards for this course:**

(<https://www.nj.gov/education/aps/cccs/arts/>)

**Unit Standards:**

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

1.1.12.B.1 Examine how aspects of meter, rhythm, tonality, intervals, chords, and harmonic progressions are organized and manipulated to establish unity and variety in genres of musical compositions.

1.1.12.B.2 Synthesize knowledge of the elements of music in the deconstruction and performance of complex musical scores from diverse cultural contexts.

1.3.12.B.3 Improvise works through the conscious manipulation of the elements of music, using a variety of traditional and nontraditional sound sources, including electronic sound-generating equipment and music generation programs.

1.4.12.A.3 Develop informed personal responses to an assortment of artworks across the four arts disciplines (dance, music, theatre, and visual art), using historical significance, craftsmanship, cultural context, and originality as criteria for assigning value to the works.

#### **21st Century Standards**

<https://www.state.nj.us/education/aps/cccs/career/>

- **9.2 Career Awareness, Exploration, and Preparation**

This standard outlines the importance of being knowledgeable about one's interests and talents, and being well informed about postsecondary and career options, career planning, and career requirements.

**21st Century Career Ready Practices**

- CRP2. Apply appropriate academic and technical skills.
- CRP4. Communicate clearly and effectively and with reason.
- CRP5. Consider the environmental, social and economic impacts of decisions.
- CRP6. Demonstrate creativity and innovation.
- CRP7. Employ valid and reliable research strategies.
- CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
- CRP11. Use technology to enhance productivity.

**Transfer Goal(s):** Students will be able to independently use their learning to organize and compose a soundscape utilizing modern music techniques.

Enduring Understandings

Students will understand that. . .

*EU 1*

digital sampling and synthesis are contemporary techniques used in music composition, sound Foley, and film scoring.

Essential Questions

*EU 1*

- How does modern synthesis influence the creation of “Dubstep” and other genres?
- How have technological advances changed the way sound Foley is produced?
- How has digital sampling and synthesis changed the way music is produced for film?

Knowledge

Students will know. . .

Skills

Students will be able to. . .

*EU 1*

- the advanced techniques of digital sampling including capture devices, environmental surroundings and format differences.
- the audio signal flow through multiple oscillators.
- that manipulating digital samples can create new sounds.
- the parts of an Envelope.
- terms and techniques of advanced synthesis and digital sampling.

*EU1*

- route signal flow through multiple oscillators.
- integrate digital samples and synthesis to create a patch.
- create a complex synthesizer patch from scratch.
- manipulate waveform envelopes to create sound patches.
- record digital samples using portable recording devices.
- record digital samples using different types of microphones.
- import samples into a DAW and manipulate them to create a new patch.

**Stage Two - Assessment**

*Other Evidence:*

- Create a “Munchkinized” version of your voice for peer critique.
- Quiz on terms and techniques of synthesis and digital sampling.

**Stage Three - Instruction**

***Learning Plan:* Suggested Learning Activities to Include Differentiated Instruction and Interdisciplinary Connections: Each learning activity listed must be accompanied by a learning goal of A= Acquiring basic knowledge and skills, M= Making meaning and/or a T= Transfer.**

- Analyze sample-based recordings trying to determine techniques used. (A) (EU1)
- The students will create original sound effects from samples to be used as Foley in a video. (T)(EU1)

- Teacher directed discussion on use of different types of microphones used in sampling. (A)(EU1)
- Students will experiment with portable recording devices when collecting samples for their archive. (A)(EU1)
- Teacher directed discussion on converting various formats of audio for use in sampling projects. (A)(EU1)
- Students will use a DAW and a Software synthesizer to create a new patch with teacher guided parameters. (M)(EU1)
- Students will trace the signal flow of a single oscillator and diagram the flow in a written chart. (M)(EU1)
- Students will create a short piece of music using only sampled sounds. (T)(EU1)
- Student will create a short piece of music using only synthesized sounds. (T)(EU1)
- Students will create a drum kit using only sampled sounds. (T)(EU1)