Intermediate Unit 4: Sound Design and Synthesis

Content Area: **Arts**
Course(s): **Music Technology**
Time Period: **Semester 1 & 2**
Length: **3-4 Weeks**
Status: **Published**

Standards

1.3E.12acc.Cr3	Refining and completing products.
	Evaluate, Refine
1.3E.12acc.Cr3b	Share compositions and improvisations that demonstrate musical and technological craftsmanship as well as the use of digital and/or analog tools and resources in developing and organizing musical ideas.
1.3E.12acc.Pr5	Developing and refining techniques and models or steps needed to create products.
VPA.1.1.12	All students will demonstrate an understanding of the elements and principles that govern the creation of works of art in dance, music, theatre, and visual art.
VPA.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.
VPA.1.1.12.B.CS1	Understanding nuanced stylistic differences among various genres of music is a component of musical fluency. Meter, rhythm, tonality, and harmonics are determining factors in the categorization of musical genres.
VPA.1.3.12.B	Music
VPA.1.3.12.B.2	Analyze how the elements of music are manipulated in original or prepared musical scores.
VPA.1.3.12.B.CS1	Technical accuracy, musicality, and stylistic considerations vary according to genre, culture, and historical era.
VPA.1.3.12.B.CS3	Understanding of how to manipulate the elements of music is a contributing factor to musical artistry.
CAEP.9.2.12.C.3	Identify transferable career skills and design alternate career plans.
TECH.8.1.12.A	Technology Operations and Concepts: Students demonstrate a sound understanding of technology concepts, systems and operations.
TECH.8.1.12.A.CS1	Understand and use technology systems.

Enduring Understandings

1. All sounds are categorized by properties of attack, decay, sustain and release. (ADSR)
2. Synthesized sounds are characterized by their likeness to acoustic instrument families.
3. The recreation of sounds in reference tracks is fundamental to building a sound design vocabulary.

Essential Questions

1. What are the acoustic qualities which differentiate one sound from another?
2. What is a synthesizer and how has its invention revolutionized the music industry?
3. How can the understanding of sound design elements improve overall productions?

Knowledge and Skills

Music Technology Students will be able to:

- Define the basic acoustic properties of sound: Attack, Decay, Sustain and Release.
- Categorize sounds according to these properties.
- Recreate specific classes of sounds according to their uses within modern musical productions.
- Combine these created sounds with other mixing techniques to enhance their original compositions.

Terminology:

- Attack
- Decay
- Sustain
- Release
- Synthesize
- Moog
- Korg
- Voltage
- Amp
- Filter
- Envelop
- Oscillator
- VCO (Voltage Controlled Oscillator)
- LFO (Low Frequency Oscillator)
- Pitch
- Shape
- Cutoff

Resources

- FL Studio Recording Software (https://www.image-line.com/flstudio/)
- In The Mix FL Studio Training (https://www.youtube.com/channel/UCIcCXe3iWo6lq-iWKV40Oug)
- Microphones, audio interfaces, related cables
- Splice.com Sampling Application (https://splice.com/home)
- Classroom (M:) Drive

- Supplementary Videos
- Keyboards
- Bandcamp Publication Website (https://bandcamp.com/)
- Synthesizer A-Z Terminology (https://rolandcorp.com.au/blog/a-to-z-synthesizer)
- Synthesizer Overviews (https://www.youtube.com/c/loopop/videos)
- More Helpful Synthesizer Terminology and Descriptions (https://www.reddit.com/r/synthesizers/comments/feenuv/what_are_the_different_types_of_synth_sounds_if/)

Transfer Goals

1. Students will be able to define and manipulate the basic properties of sound production.
2. Students will be able to implement these fundamentals to create original sounds for use in compositions.

Assessments

Assessments

Modifications

Modifications