

Pequea Valley School District
Music

Unit 1: Introduction to Music Technology

Course: Music Technology

Grade: 7/8

Introduction to Music Technology

Unit Essential Question(s):

- How are students expected to behave when using school technology? What are the classroom rules associated with those expectations?
- How does a student respond to a class discussion on Schoology?
- How does a student submit a class assignment using Schoology?
- What is a soundscape? What makes up the soundscape in the room? Does it ever change or does it stay the same?
- What is gain?
- What is compression?
- What is panning?
- What is clipping?
- What is pitch?
- What is a synthesizer?
- What is a microphone?
- What are headphones?
- What is GarageBand?
- What is a loop?
- What is multi-tracking?

Keystone Eligible Content/Common Core Standard

- 9.1.8.A
- 9.1.8.B
- 9.1.8.C
- 9.1.8.J
- 9.1.8.K

Pacing:

- 3

Tier 3 Vocabulary:

- Soundscape
- gain
- compression
- panning
- clipping
- pitch
- synthesizer
- microphone, headphones
- GarageBand
- loop
- multi-tracking

Know:

- The basic skills required to operate the various electronic devices used in class.

Understand:

- Students will acquire the basic skills required to operate the electronic devices used in class.
- Students will understand how the vocabulary terms relate to using GarageBand.

Learning Outcome:

- Students will be able to create pieces that reflect the skills and knowledge acquired in the class:
 - Soundscape
 - Incredibox
 - GarageBand

Competencies:

- Students will work independently on pieces and share with the class.
 - The class as a whole will listen to and assess their own work and the work of others based on the unit guidelines.

Unit assessments:

- Create a soundscape at www.wildmusic/soundscapes/buildsoundscape.
- Create a piece using www.incredibox.com/
- Create a short piece of music with GarageBand showing correct use of gain and panning.

Resources:

- Schoology
- GarageBand
- Soundscape

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Unit 2: Acoustics: The Science of Sound

Course: Music Technology

Grade: 7/8

Acoustics: The Science of Sound

Unit Essential Question(s):

- What is a sound wave?
- What does the height of the sound wave represent?
- What does the width of the sound wave represent?
- How does sound travel?
- How does your brain receive a sound wave?
- What are the three main parts of the human ear? How do they work?
- What is a decibel?
- What is the acceptable decibel range for the human ear?
- What happens if the decibel levels are too high?

Keystone Eligible Content/Common Core Standard:

- 9.1.8.A
- 9.1.8.C
- 9.1.8.K

Pacing:

- 3

Tier 3 Vocabulary:

- Soundwave
- Decibel
- Inner ear
- Middle ear
- Outer ear

Know:

- Properties of soundwaves
- How sound travels
- Structure of the human ear and how sound is received
- Relationship between the shape of the sound in relation to the pitch and volume
- Definition of a decibel and how to interpret decibel measurements

Understand:

- Students will understand the definition of sound waves and decibels and the risks of higher decibel range.

Learning Outcome:

- Students will be able to measure the decibel level of various locations and compare and contrast their findings.

Competencies:

- Accurately measure, analyze and compare decibel levels.

Unit Assessments:

- Measure decibel levels in various locations.
- Analyze individual and group results and post to Schoology.

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Unit 3: Sound Engineering

Course: Music Technology

Grade: 7/8

Sound Engineering

Unit Essential Question(s):

- How do you perform a ‘pitch shift’ to a clip in GarageBand?
- How do you perform a ‘speed’ transformation to a clip in GarageBand?
- How do you perform a ‘tempo’ transformation to a clip in GarageBand?
- How do you record your voice using a microphone and GarageBand?
- How do you eliminate clipping from a recording using GarageBand?
- How do you split/cut/copy/paste a portion of a clip in GarageBand?
- How do you obtain a room noise profile and remove the room noise from an audio clip?
- How do you use www.freesound.org to download audio clips?
- How do you import sound clips into GarageBand?
- How do you create multiple audio tracks in GarageBand?

Keystone Eligible Content/Common Core Standard

- 9.1.8.A
- 9.1.8.B
- 9.1.8.C
- 9.1.8.J
- 9.1.8.K

Pacing:

- 10

Tier 3 Vocabulary:

- Pitch shift
- Speed
- Tempo
- Split
- Cut

- Copy
- Paste
- Clipping
- Room noise
- Import

Know:

- How to add, subtract, move and fine tune loops in GarageBand

Understand:

- Students will understand how to use GarageBand to transform a sound wave through pitch and tempo changes.
- Students will understand how to use GarageBand to record using a microphone with appropriate levels without clipping.

Learning Outcome:

- Students will be able to use GarageBand to create two soundscape projects using the acquired skills
- Students will be able to access and download music from www.freesound.org

Competencies:

- Students will acquire the skills to perform a variety of functions in GarageBand.
- Students will import audio clips into GarageBand to use in the Soundscape projects.

Unit assessments:

- Soundscape project #1 (Scary Scene) and #2 (Rainforest / Jungles)

Resources:

- GarageBand

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Music**

Unit 4: The Business of Music

Course: Music Technology

Grade: 7/8

The Business of Music

Unit Essential Question(s):

- How can an interest in music lead into a career in the music field?

Keystone Eligible Content/Common Core Standard:

- 9.1.8.B
- 9.1.8.C
- 9.1.8.J
- 9.1.8.K

Pacing:

- 10

Tier 3 Vocabulary:

- Music Engineering
- Recording Engineer / Mixer
- Producer
- Sound Technician
- Audio Engineer
- Music Editor
- Sound Designer
- Audio Developer

Know:

- Possible career clusters and paths leading to music related careers.

Understand:

- Students will understand the music career paths and the job description, characteristics and education needed.

Learning Outcome:

- Students will identify a career in the music industry that aligns to their interests, musical skills set and talents.

Competencies:

- Define and research 2 careers relating to music technology.
- Reflect on the out of school educations trips and the career paths needed

Unit assessments:**Resources:**

- Trip to Lebanon Valley College to see their Audio and Music Production and Music Business programs
- Field Trip to Clair Brothers or Rock Lititz
- Career Cruising

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Unit 5: The Technology of Music

Course: Music Technology

Grade: 7/8

The Technology of Music

Unit Essential Question(s):

- When was the first human voice ever recorded and on what device?
- How does a phonograph work? Is it analog or digital technology?
- How does an LP work? Is it analog or digital technology?
- How does an audio cassette tape and 8 track work? Is it analog or digital technology?
- What product did Sony introduce in 1978 that sold over 100 million units?
- How does a CD work? Is it analog or digital technology?
- What was the first digital music technology developed?
- What did Karlheinz Brandenburg invent?
- What does MP3 stand for and how is it used?
- When was the first digital audio player introduced? What was its name?
- How did Napster get started and what was file sharing's impact on the music industry?
- In 2001, Apple Computers introduced their own MP3 player. What was its name?
- Who was the founder/CEO of Apple Computers?
- What was the initial reaction from the music industry regarding Apple's iTunes store (and having each song sold for 99 cents)?
- What is the iTunes store? How did it change the music industry?
- How did the iPod change the way we listen to music?
- Why did the iPod become so popular?
- How did the iTunes store make CD stores go out of business?
- Who did the RIAA file lawsuits against (in general)?
- Name two examples of RIAA lawsuits for illegal music piracy and name some legal alternatives to illegal music piracy.

Keystone Eligible Content/Common Core Standard:

- 9.1.8.A
- 9.1.8.B
- 9.1.8.C
- 9.1.8.J
- 9.1.8.K

Pacing:

- 9

Tier 3 Vocabulary:

- phonograph
- LP
- 8 track
- audio cassette tape
- analog
- digital
- MP3
- file sharing
- iPod
- iTunes
- RIAA
- piracy
- copyright infringement
- P2P
- Napster

Know:

- History and relevance of music recording technology, analog and digital music.
- RIAA actions against piracy

Understand:

- Students will understand the difference between analog and digital music and how digital music and the iPod changed the music industry.
- Students will understand the RIAA and lawsuits brought by the RIAA in music piracy lawsuits.

Learning Outcome:

- Students will be able to identify music recording technology and the time period it was introduced/used.
- Students will be able to define the vocabulary terms as they relate to

Competencies:

- Make a Prezi of the history of recording technology
- Students will create a futuristic iPod in groups.
- Participate in a debate about RIAA and music piracy

Unit assessments:

- Create a Prezi of the history of recording technology using a student generated piece of music and present to the class.
- In groups, create a futuristic iPod. Groups assess the design and functionality of the iPod.
- Debate on either side about the RIAA and music piracy

Resources:

- Prezi

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Unit 6: Final Project Creation

Course: Music Technology

Grade: 7/8

Final Project Creation

Unit Essential Question(s):

- How do you show mastery of the learned skills and competencies in GarageBand to communicate the theme to a broader audience.

Keystone Eligible Content/Common Core Standard:

- 9.1.8.A
- 9.1.8.B
- 9.1.8.C
- 9.1.8.J
- 9.1.8.K
- 9.3.8.B

Pacing:

- 9

Tier 3 Vocabulary:

- pitch shift,
- speed, tempo,
- split,
- cut,
- copy,
- paste,
- clipping,
- room noise,
- import

Know:

- How to add, subtract, move and fine tune loops in GarageBand

Understand:

- Students will understand how to utilize a variety of tools in GarageBand to create a final project

Learning Outcome:

- Students need to be able to create a three to four minute GarageBand project by using the acquired skills

Competencies:

- Students will acquire the skills to perform a variety of functions in GarageBand.

Unit assessments:

- Uploading projects to Schoology and presenting to a group of peers and educators.