

Rumson-Fair Haven Regional High School

Course: *Recording*

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Section I: Course Description

Recording is a course designed to introduce students to the fundamentals of music production and music technology. Students will be introduced to recording technology in the classroom, such as specific microphones and computer software. Specific recording techniques related to drums, electric guitars, acoustic guitars, electric bass guitars, pianos, vocals, synthesizers, and horns (woodwind and brass) will be discussed. Post production effects such as EQ, reverb, and compression will be covered in detail.

Section II: NJSLs: New Jersey Student Learning Standards/Learning Objectives

1. **2020 New Jersey Student Learning Standards – Visual and Performing Arts**
 - The NJSLs-VPA reflect the National Core Arts Standards and emphasize the process-oriented nature of the arts and arts learning by: defining artistic literacy through a set of overarching philosophical foundations and lifelong goals that clarify long-term expectations for arts learning; placing artistic processes and anchor standards at the forefront of the work; identifying creative artistic practices as the bridge for the application of the artistic processes and anchor standards across all learning; and specifying enduring understandings and essential questions that provide conceptual through lines and articulate value and meaning within and across the arts discipline.
2. **Standard 8.1 (Computer Science) and 8.2 (Design Thinking) of the 2020 NJSLs:**
 - “The ‘Intent and Spirit of the Computer Science and Design Thinking Standards’ is to focus on deep understanding of concepts that enable students to think critically and systematically about leveraging technology to solve local and global issues. Authentic learning experiences that enable students to apply content knowledge, integrate concepts across disciplines, develop computational thinking skills, acquire and incorporate varied perspectives, and communicate with diverse audiences about the use and effects of computing prepares New Jersey students for college and careers.”
3. **Standard 9.4 (Life Literacies and Key Skills) of the 2020 NJSLs:**
 - “This standard outlines key literacies and technical skills such as critical thinking, global and cultural awareness, and technology literacy* that are critical for students to develop to live and work in an interconnected global economy.”
 - **Climate Change:** The state of New Jersey has mandated instruction in, “Climate Change across all content areas, leveraging the passion students have shown for this critical issue and providing them opportunities to develop a deep understanding of the science behind the changes and to explore the solutions our world desperately needs.”
4. **LGBT and Disabilities Law: N.J.S.A. 18A:35-4.35:**
 - A transformative approach to the inclusion of lessons and resources/texts on the contributions and issues concerning the LGBTQ+ population and people with disabilities will be implemented across all core subjects in accordance with state law: “A board of education shall include instruction on the political, economic, and social contributions of persons with disabilities and lesbian, gay, bisexual, and transgender people, in an appropriate place in the curriculum of middle school and high school students as part of the district’s implementation of the New Jersey Student Learning Standards (N.J.S.A.18A:35-4.36). A board of education shall have policies and procedures in place pertaining to the selection of instructional materials to implement the requirements of N.J.S.A. 18A:35-4.35.”
5. Acquisition/development/refinement of the higher-order critical thinking skills aligned with the *Revised Bloom’s Taxonomy of Cognitive Objectives*

Section III: Curriculum Modifications

The *Recording* Curriculum is subject to case-by-case modifications to support/advance the needs of all students, including special education students, English language learners, gifted students and those at risk of school failure. These modifications are based on Individualized Learning Programs (IEPs), recommendations made by the district’s English Language Learners (ELL) coordinator, feedback from members of the Intervention & Referral Services Team (*I&RS*) for at-risk students, and 504 Plans.

Coursework and assessments will be modified individually for students when necessary. Modifications may include but are not limited to:

- Small group instruction
- One-on-one instruction
- Independent work stations
- Use of graphic organizers
- Interest inventories and questionnaires
- Audio resources to complement written texts and concepts
- Visual resources to complement written texts and concepts
- Extra time on assessments and large scale projects
- Reduced length of written assignments
- Large projects broken into smaller tasks and timelines
- Tiered Instruction
- Individual help during practice
- Diagrams and color coding for visual learners
- Verbal and written directions for visual and auditory learners
- Provided class notes
- Preferential seating
- Spelling not penalized
- Varied supplemental activities
- Assessments delivered orally

Section IV: Preparation for Standardized Testing

This *Recording* curriculum is aligned with the requirements of state and national standardized assessments, including the *NJSLA*, the *ACT*, the *PSAT* and the *SAT*.

Section V: Curriculum Pacing Guide

Curriculum Pacing Guide	
Course Title: <i>Recording</i>	Grade Level: 9-12
Unit I: Preproduction and DAW Fundamentals	Weeks 1-3
Unit II: Recording Electronic Instruments and Using Effects	Weeks 4-8
Unit III: Recording Acoustic Instruments	Weeks 9-12
Unit IV: Fundamentals of Post Production	Weeks 13-16
Unit V: Final Project	Weeks 17-20

Section VI: Primary Texts and Year Long Instructional Resources

The following texts and instructional resources are employed in *Recording*:

- *Common Sense Education* (www.commonsense.org)

- Google Classroom
- MIDI Keyboards
- Headphones
- Microphones
- Soundtrap
- Logic

Section VII: Grading Formula and Assessment Modes

Marking period grades in *Recording* are determined via a percentage weighting model. The specific grading categories and weightings of each will be determined prior to the start of each academic year and will be published in the posted/distributed course syllabi.

Section VIII: Unit Templates

The following unit templates have been established for the *Recording* curriculum:

Unit I: Preproduction and DAW Fundamentals	
Unit Summary	
<p>Students will be introduced for the first time with the materials found in the classroom, and become acclimated with the basics of the digital audio workstations (Soundtrap and Logic) found in the classroom so that they may use them in future units. Students will also be introduced to the introductory building blocks of recording. These building blocks include Signal Flow, introductory techniques, editing, and mixing. The instructor will introduce recording materials found in the classroom such as microphones, instruments, and interfaces. Student's will be introduced to acoustic treatment in order to make their rooms at school and at home sound good.</p>	
Standards/Core Ideas/Performance Expectations	
<p>The state standards outlined below, and established by New Jersey Department of Education, will guide instruction throughout this unit in <i>Recording</i>:</p> <ul style="list-style-type: none"> ● <i>2020 New Jersey Student Learning Standards in Visual and Performing Arts: 9-12</i> <ul style="list-style-type: none"> ○ <i>1.3B-Music Composition and Theory</i> <ul style="list-style-type: none"> ■ <i>1.3B.12prof.Cn10a, 1.3B.12acc.Cn10a, 1.3B.12adv.Cn10a</i> ■ <i>1.3B.12prof.Cn11a, 1.3B.12acc.Cn11a, 1.3B.12adv.Cn11a</i> ○ <i>1.3E-Music Technology</i> <ul style="list-style-type: none"> ■ <i>1.3E.12prof.Cr1a, 1.3E.12acc.Cr1a, 1.3E.12adv.Cr1a</i> ■ <i>1.3E.12prof.Cr2a, 1.3E.12acc.Cr2a, 1.3E.12adv.Cr2a</i> ■ <i>1.3E.12prof.Pr6a-6b, 1.3E.12acc.Pr6a-6b, 1.3E.12adv.Pr6a-6b</i> ■ <i>1.3E.12prof.Re8a, 1.3E.12acc.Re8a, 1.3E.12adv.Re8a</i> ■ <i>1.3E.12prof.Re9a, 1.3E.12acc.Re9a, 1.3E.12adv.Re9a</i> ● <i>2020 New Jersey Student Learning Standards: Career Readiness, Life Literacies and Key Skills</i> <ul style="list-style-type: none"> ○ <i>9.4.2.CI.1-2, 9.4.12.CT.2, etc.</i> 	
Unit Essential Questions	Unit Enduring Understandings
<ul style="list-style-type: none"> ● What are the common ways of approaching recording? ● What are the main building blocks of a successful recording? ● What technology is found in the classroom, and how can we access it? ● What is the difference between stereo and mono? ● What is sound? ● What is "Frequency Response"? ● What is an "envelope"? 	<ul style="list-style-type: none"> ● Signal flow is an essential concept to understanding the recording process. ● Fundamentals of sound essential to recording include phase, cycles per second (Hz), and amplitude. ● Fundamental recording concepts essential to the recording process include sample rate, bit depth, file type, phase, and human perception of sound. ● Different types of Microphones (dynamic, condenser, ribbon, tube can be used to achieve different effects in different settings. ● There are different ways to record music, such as live recording vs. overdubbing. ● Sound trap is a useful tool for recording. It enables users to utilize automation, stems, and loops. ● Every device that sound goes through has an effect on that sound's frequency. This is called frequency response.
Evidence of Learning	

Formative Assessment: <ul style="list-style-type: none"> ● Soundtrap “repeat after me” assignment ● Create your own Beat Map ● Collaborative Spotify playlist (listen to mixes carefully) ● Clap with rhythm and mute song ● Feedback presentation 	Summative Assessment: <ul style="list-style-type: none"> ● Unit 1 Project: Mixing pre recorded Stems ● Unit 1 Hotkey and Vocab Quiz ● Short one instrument punch in recording 	Resources Needed: <ul style="list-style-type: none"> ● Computers ● MIDI Keyboards ● Audio Interface ● Pro Tools ● Microphones
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Unit II: Recording Electronic Instruments and Using Effects

Unit Summary

Students will discuss MIDI recording techniques. Students will be introduced to VST’s (Virtual Study Technology) and be expected to complete simple recording tasks such as speech recordings and overdubbing. These tasks will include usage of automation, reverb, EQ, and Compression. Basic’s of VST’s will be discussed such as sound stacking and effects.

Standards/Core Ideas/Performance Expectations

The state standards outlined below, and established by New Jersey Department of Education, will guide instruction throughout this unit in *Recording*:

- *2020 New Jersey Student Learning Standards in Visual and Performing Arts: 9-12*
 - *1.3B-Music Composition and Theory*
 - *1.3B.12prof.Cn10a, 1.3B.12acc.Cn10a, 1.3B.12adv.Cn10a*
 - *1.3B.12prof.Cn11a, 1.3B.12acc.Cn11a, 1.3B.12adv.Cn11a*
 - *1.3E-Music Technology*
 - *1.3E.12prof.Cr1a, 1.3E.12acc.Cr1a, 1.3E.12adv.Cr1a*
 - *1.3E.12prof.Cr2a, 1.3E.12acc.Cr2a, 1.3E.12adv.Cr2a*
 - *1.3E.12prof.Pr4a-4c, 1.3E.12acc.Pr4a-4c, 1.3E.12adv.Pr4a-4c*
 - *1.3E.12prof.Pr5a, 1.3E.12acc.Pr5a, 1.3E.12adv.Pr5a*
 - *1.3E.12prof.Pr6a-6b, 1.3E.12acc.Pr6a-6b, 1.3E.12adv.Pr6a-6b*
 - *1.3E.12prof.Re7a-7b, 1.3E.12acc.Re7a-7b, 1.3E.12adv.Re7a-7b*
 - *1.3E.12prof.Re8a, 1.3E.12acc.Re8a, 1.3E.12adv.Re8a*
 - *1.3E.12prof.Re9a, 1.3E.12acc.Re9a, 1.3E.12adv.Re9a*
- *2020 New Jersey Student Learning Standards: Career Readiness, Life Literacies and Key Skills*
 - 9.4.2.CI.1-2, 9.4.12.CT.2, etc.

Unit Essential Questions

- What is a VST?
- What are plug-ins (also known as signal processing)?
- What is overdubbing?
- What is signal flow?
- What are subgroups?
- What do musicians mean by ADSR?

Unit Enduring Understandings

- VSTs and plugins greatly enhance the capabilities of a digital audio workstation.
- It is important to understand the order of signal flow while recording (audio source, interface input, computer, DAW channel, DAW mix bus, interface output, headphones, you).
- Signal flow when mixing follows this pattern: plugins, fader, pan knob, channel bus, mix bus, mix bus fader, interface, speakers or headphones, listener.
- Signal flow is different for mixing than it is for recording.
- Artists use subgroups to organize tracks during the mixing process.
- ADSR stands for attack, decay, sustain and release. These are the four essential components of sound that musicians manipulate when mixing.

Evidence of Learning

Formative Assessment: <ul style="list-style-type: none"> ● Favorite alchemy sounds class library ● Using mix bus check ● Using master bus check 	Summative Assessment: <ul style="list-style-type: none"> ● Unit 2 Project: Podcast with overdubbing using electronic instruments assignment ● Using Plug-Ins check ● Unit 2 Hotkey quiz 	Resources Needed: <ul style="list-style-type: none"> ● Computers ● MIDI Keyboards ● Audio Interface ● Pro Tools ● Microphones
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Unit III: Recording Acoustic Instruments

Unit Summary

Students will now put their skills of Logic and mixing to the test by recording their own acoustic instruments. Mic placement and gain staging will be focused on in this unit, along with an emphasis on listening to other artist's mixes. By the end of this unit, students will have live recorded every instrument they need to succeed in a recording setting. This will ideally allow students to do sound at live events and run their own recording sessions with fellow musicians. Students will also learn about mic technique when singing on a live stage or in a recording booth.

Standards/Core Ideas/Performance Expectations

The state standards outlined below, and established by New Jersey Department of Education, will guide instruction throughout this unit in *Recording*:

- *2020 New Jersey Student Learning Standards in Visual and Performing Arts: 9-12*
 - *1.3E-Music Technology*
 - *1.3E.12prof.Pr4a-4c, 1.3E.12acc.Pr4a-4c, 1.3E.12adv.Pr4a-4c*
 - *1.3E.12prof.Pr5a, 1.3E.12acc.Pr5a, 1.3E.12adv.Pr5a*
 - *1.3E.12prof.Re7a-7b, 1.3E.12acc.Re7a-7b, 1.3E.12adv.Re7a-7b*
 - *1.3E.12prof.Re8a, 1.3E.12acc.Re8a, 1.3E.12adv.Re8ea*
 - *1.3E.12prof.Re9a, 1.3E.12acc.Re9a, 1.3E.12adv.Re9a,*
- *2020 New Jersey Student Learning Standards: Career Readiness, Life Literacies and Key Skills*
 - 9.4.2.CI.1-2, 9.4.12.CT.2, etc.

Unit Essential Questions

- How do we record guitar?
- How do we record piano?
- How do we record drum sets?
- How do we record auxiliary instruments?

Unit Enduring Understandings

- It is important to understand and apply gain stage.
- The three types of microphones are dynamic, condenser, and ribbon. Different microphones have different applications for recording.
- Chances are your room will not sound good. Acoustic padding and dampeners are usually essential for recording drum sets.
- There are different ways to mic drum sets.
- Mixing acoustic instruments can present challenges in the recording setting. It helps to develop several techniques to record acoustic instruments.

Evidence of Learning

Formative Assessment:

- Student proper gain staging assignment
- Mic on amplifier placement assignment

Summative Assessment:

- Acoustic Instruments sound quiz
- Drum Set Micing day assessment
- Unit 3 Hotkey quiz
- [Unit 3 Project: Mixing an acoustic drum set loop using a summing stack](#)

Resources Needed:

- Computers
- MIDI Keyboards
- Audio Interface
- Pro Tools
- Microphones

Unit IV: Fundamentals of Post Production

Unit Summary

Students will discuss the elements of post production in detail. This means putting the final touches on effects like reverb, EQ, compression, and distortion. Post production tricks include vocal layers (with or without octaves), clearing space of frequencies using EQ, headroom and metering, stereo spreading (imaging), and Logic Phat Effects. Students will also discuss what it means to A/B and how to effectively A/B using Logic. Students will also be introduced to their master fader.

Standards/Core Ideas/Performance Expectations

The state standards outlined below, and established by New Jersey Department of Education, will guide instruction throughout this unit in *Recording*:

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 - *1.3E.12prof.Cr2a, 1.3E.12acc.Cr2a, 1.3E.12adv.Cr2a*
 - *1.3E.12prof.Pr5a, 1.3E.12acc.Pr5a, 1.3E.12adv.Pr5a*
 - *1.3E.12prof.Re7a-7b, 1.3E.12acc.Re7a-7b, 1.3E.12adv.Re7a-7b*

<ul style="list-style-type: none"> ■ 1.3E.12prof.Re8a, 1.3E.12acc.Re8a, 1.3E.12adv.Re8a ■ 1.3E.12prof.Re9a, 1.3E.12acc.Re9a, 1.3E.12adv.Re9a ● 2020 New Jersey Student Learning Standards: Career Readiness, Life Literacies and Key Skills <ul style="list-style-type: none"> ○ 9.4.2.CI.1-2, 9.4.12.CT.2, etc. 		
Unit Essential Questions	Unit Enduring Understandings	
<ul style="list-style-type: none"> ● How do pros use compression and reverb on professional recordings? ● How much is too much or too little EQ? ● How do we make vocals pop in a mix? ● What is mastering? ● What does it mean to have a muddy mix? ● What is side chaining? 	<ul style="list-style-type: none"> ● Flex Time and Flex Pitch are professional mixing tools in Logic used to fix rhythm and pitch nuances. ● ● Live orchestras are not in random order of instruments. They are designed so that soft instruments are in the front and loud instruments are in the back. Instruments with similar timbres and ranges like violins and trumpets are opposite one another. ● Leaving low frequencies open on recordings for the drums and bass will enhance the quality of recordings. ● Many people hire someone else to master the mix after having their judgment clouded after listening to the song over and over again. ● Sidechaining is a technique used during mixes to influence how sounds react with one another. ● Muddy Mixes are mixes where a song does not sound crisp and clear. However, sometimes these mixes can be used to a song's advantage or can be advantageous for learning. 	
Evidence of Learning		
Formative Assessment: <ul style="list-style-type: none"> ● Music instruments spectrum identification assignment ● Master Fader plugins check 	Summative Assessment: <ul style="list-style-type: none"> ● Unit 4 hotkey quiz ● Unit 4 Project: Record a cover using at least two acoustic instruments 	Resources Needed: <ul style="list-style-type: none"> ● Computers ● MIDI Keyboards ● Audio Interface ● Pro Tools ● Microphones

Unit V: Final Project	
Unit Summary	
<p>Students will put together their skills in pre-production, recording electronic instruments, using effects, recording audio, and post production to complete one final project for the quarter. Students will then upload their final project to a music cloud such as Bandcamp, Soundcloud, or Youtube. The instructor will provide one on one help sessions and class review sessions of past units.</p>	
Standards/Core Ideas/Performance Expectations	
<p>The state standards outlined below, and established by New Jersey Department of Education, will guide instruction throughout this unit in <i>Recording</i>:</p> <ul style="list-style-type: none"> ● 2020 New Jersey Student Learning Standards in Visual and Performing Arts: 9-12 <ul style="list-style-type: none"> ○ 1.3B-Music Composition and Theory <ul style="list-style-type: none"> ■ 1.3B.12prof.Cn10a, 1.3B.12acc.Cn10a, 1.3B.12adv.Cn10a ■ 1.3B.12prof.Cn11a, 1.3B.12acc.Cn11a, 1.3B.12adv.Cn11a ○ 1.3E-Music Technology <ul style="list-style-type: none"> ■ 1.3E.12prof.Cr1a, 1.3E.12acc.Cr1a, 1.3E.12adv.Cr1a ■ 1.3E.12prof.Cr2a, 1.3E.12acc.Cr2a, 1.3E.12adv.Cr2a ■ 1.3E.12prof.Pr5a, 1.3E.12acc.Pr5a, 1.3E.12adv.Pr5a ■ 1.3E.12prof.Re7a-7b, 1.3E.12acc.Re7a-7b, 1.3E.12adv.Re7a-7b ■ 1.3E.12prof.Re8a, 1.3E.12acc.Re8a, 1.3E.12adv.Re8a ■ 1.3E.12prof.Re9a, 1.3E.12acc.Re9a, 1.3E.12adv.Re9a ● 2020 New Jersey Student Learning Standards: Career Readiness, Life Literacies and Key Skills <ul style="list-style-type: none"> ○ 9.4.2.CI.1-2, 9.4.12.CT.2, etc. 	
Unit Essential Questions	Unit Enduring Understandings

<ul style="list-style-type: none"> How can we effectively apply all of our recording knowledge into one song using proper workflow? What readily available sources are there for uploading our music to streaming services and music clouds? 	<ul style="list-style-type: none"> Effectively using sum stacking and stereo output effects in Logic Pro or similar software may greatly enhance recording quality. Uploading music to sites such as Bandcamp, Soundcloud, and Youtube can facilitate the exportation process. There are many professional opportunities in the world of recording, mixing, and mastering
Evidence of Learning	
Formative Assessment: <ul style="list-style-type: none"> Progress Check #1 Progress Check #2 	Summative Assessment: <ul style="list-style-type: none"> Final Project: Pick a project from the previous 4 units and upload this final project to a music based cloud service
Resources Needed: <ul style="list-style-type: none"> Computers MIDI Keyboards Audio Interface Pro Tools Microphones 	

Section IX: Unit Reflection

The *Recording* instructional team must confer upon the completion of each instructional unit in the *Recording* curriculum and rate the degrees to which the instructional units meet performance criteria established by the New Jersey Department of Education using the Unit Reflection Form. Completed unit reflection forms must be submitted to the Department Supervisor for approval upon completion of curriculum implementation with a complementing list of suggested modifications to the *Recording* curriculum.

Unit Reflection Form: <i>Recording</i>			
Lesson Activities:	Strongly	Moderately	Weakly
Foster student use of technology as a tool to develop critical thinking, creativity and innovation skills;			
Are challenging and require higher order thinking and problem-solving skills;			
Allow for student choice;			
Provide scaffolding for acquiring targeted knowledge/skills;			
Integrate modern, global perspectives, especially those regarding diversity, genocide, global issues, and historical ones regarding racial relations;			
Integrate 21 st century skills;			
Provide opportunities for interdisciplinary connection and transfer of knowledge and skills;			
Are varied to address different student learning styles and preferences;			
Are differentiated based on student needs;			
Are student-centered with teacher acting as a facilitator and co-learner during the teaching and learning process;			
Provide means for students to demonstrate knowledge and skills and progress in meeting learning goals and objectives;			
Provide opportunities for student reflection and self-assessment;			
Provide data to inform and adjust instruction to better meet the varying needs of learners.			