

Formative Evaluation Plan

DECEMBER 11, 2020

EDET 722-J50

Chris Hallum | hallum@mailbox.sc.edu



hit
song
design

Introduction

The goal of this learning unit is to present theory-informed solutions to songwriting challenges and help songwriters complete more high-quality music projects. The following report is a high-level look into the greatest challenges that songwriters face in producing quality music, and it is the first step in a larger process to create a program to help musically untrained songwriters become better composers and arrangers of their own music.

Through this assessment, the efficacy of a foundational instructional unit on the Essentials of Music will be evaluated. Specifically, this unit will introduce basic musical concepts to songwriters who wish to learn more about music itself, and will be used as an introductory unit to a series of courses that will cover – in more detail – music theory, arranging, composition, aural skills, and instrumentation.

Part I – Needs Assessment

Purpose

- Not all songwriters are formally trained in music, and many also struggle to complete the songs they start. This instructional unit will be the first in a series that will bring those who are untrained to a better understanding of the meaning of basic terms and concepts in music. Once the songwriter finishes this unit, they will be better equipped to dig a bit deeper into more complex musical topics and composition/arranging methods, ultimately giving them their own workflows to finish their songs more quickly and efficiently.
- This particular Needs Assessment was necessary to get a general understanding of what songwriters see as their most significant struggles, and to try and start to understand whether or not an instructional unit on basic musical terms might provide good foundational information to them.
- The stakeholders in this project are the songwriters who willingly participated in the survey and also the songwriters whom I hope to teach in the future through the instructional unit that will be built as a result of this survey. Specifically, the author wants to teach songwriters who are open to the idea of more formal musical training as a means to better their own songwriting skills.

Process

For this Needs Assessment, two surveys were utilized:

1. An initial survey in Google Forms that sought to more generally understand struggles that songwriters perceive in their own writing process. The initial survey contained 10 questions. There were also 3 questions at the end for the respondent to provide contact information.
2. A follow-up Google Forms survey emailed to those who responded with their contact information (in the initial survey) to collect some demographic data. The follow-up survey contained 6 questions.

Both surveys contained short answer and multiple-choice questions.

The first survey was put out onto various social media groups for songwriters and producers; the majority of these groups are on Facebook, but the survey was also posted on some groups on LinkedIn. The follow-up survey was sent via email to the eight participants who provided their email addresses.

THE INITIAL SURVEY

The portions of the initial survey that dealt with needs primarily focused on felt needs. Specifically, these questions:

- Question 1: When it comes to songwriting or writing music in general, what is your single biggest struggle right now? (Please be as detailed as possible.)
- Questions 5 & 6:
 - How many songs or pieces of music have you finished in the past three months?
 - Does this number of finished products align with your goals?

Questions 2-4 were designed to get an idea of the respondent's workflow, more specifically how they identify themselves within the broad moniker "songwriter," and their musical style.

Question 7 is a multiple-choice question that sought to get an idea of the type of software primarily used by the respondent to write music.

Question 8 is a multiple-choice question designed to find out how the respondent identifies, whether primarily as an Instrumentalist, Vocalist, Both, or Other.

Question 9 is a multiple-choice question that asks about the musical instrument(s) the respondent plays (if applicable). I wanted to see if there is a possibly correlation between what is entered as a response here and as a response in question 10.

Question 10 is a Yes/No question that asks whether or not the respondent has formal training in music.

THE FOLLOW-UP SURVEY

The follow-up survey sent 6 demographic questions to those respondents in the initial survey who provided their contact information. The survey collected information on the respondents' number of years of formal musical training (multiple-choice), age (multiple-choice of age ranges), how long they've been writing music (multiple-choice of year ranges), level of education (multiple-choice), and current occupation (short answer).

HOW WAS THE DATA ANALYZED?

The initial survey was designed to gather more general data, and the responses were organized into a chart showing percentages of responses to each question. The more general questions were designed to get an idea of each respondent's current situation and what skills or tools they currently use to finish each musical project. The most important piece of analysis used in this particular assessment is the relationship between whether or not the respondent has any formal musical training and how many musical projects they have completed in the past three months.

Results

The results of this survey are provided here both in a narrative format below and a table after that.

THE INITIAL SURVEY

Certain survey questions allowed the respondent to write open-ended short answers, so the common themes of these answers have been condensed into single keywords for brevity.

Section 1: When asked “When it comes to songwriting or writing music in general, what is your single biggest struggle right now? (Please be as detailed as possible.)” the most common themes were *Finishing, Knowledge, Time Management, and Other*. When asked “What is your current songwriting process?” the most common themes were *Wait for inspiration, Sit with instrument, and Theory-based writing*.

Section 2 [Type of Creator]: When asked “Which of the following best describes you?” 89% responded “Songwriter,” 22% responded “Composer,” 11% responded “Lyricist,” 11% responded “Arranger,” and 11% responded “Pianist.” When asked “What style(s) of music do you write?” 56% responded “Christian/Worship,” 33% responded “Pop,” 11% responded “Classical,” 22% responded “Ballad/Eclectic,” and 33% responded “Folk/Indie rock.” When asked “How many songs or pieces of music have you finished in the past three months?” 33% responded “1,” 33% responded “2,” 11% responded “3,” and 22% responded “4 [or more].” When asked “Does this number of finished products align with your goals?” 22% responded “Yes,” and 77% responded “No.” When asked “Do you use any of the following in your music writing process?” 44% replied “Logic,” 0% replied “Cubase,” 0% replied “Pro Tools,” 22% replied “Garageband,” 11% replied “Ableton,” 0% replied “Reaper,” and 33% replied “Other.” When asked to respond to “I primarily identify as a(n),” 11.1% responded “Instrumentalist,” 22.2% responded “Vocalist,” 55.5% responded “Both,” and 22.2% responded “Other.”

Section 3 [Instruments]: When asked “What instrument(s) do you play?” 63% responded “Guitar,” 100% responded “Piano,” 37.5% responded “Percussion,” 37.5% responded “Bass,” and 25% responded “Other.”

Section 4 [Musical Training]: When asked “Do you have formal training in music? (i.e. you have taken music lessons for a sustained period of time or you studied music in school.)” 66% responded “Yes” and 33% responded “No.”

When it comes to songwriting or writing music in general, what is your single biggest struggle right now? (Please be as detailed as possible.)

- Finishing
- Knowledge
- Time Management
- Other

What is your current songwriting process?

- Wait for inspiration
- Sit with instrument
- Theory-based writing

Which of the following best describes you? (N=9)

Songwriter	89% (8)
Composer	22% (2)
Lyricist	11% (1)
Arranger	11% (1)
Pianist	11% (1)

What style(s) of music do you write? (N=9)

Christian/Worship	56% (5)
Pop	33% (3)
Classical	11% (1)
Ballad/Eclectic	22% (2)
Folk/Indie rock	33% (3)

How many songs or pieces of music have you finished in the past three months? (N=9)

1	33% (3)
2	33% (3)
3	11% (1)
4 or more	22% (2)

Does this number of finished products align with your goals? (N=9)

Yes	22% (2)
No	77% (7)

Do you use any of the following in your music writing process? (N=9)

Logic	44% (4)
Cubase	0% (0)
Pro Tools	0% (0)
Garageband	22% (2)
Ableton	11% (1)
Reaper	0% (0)
Other	33% (3)

I primarily identify as a(n) (N=9)

Instrumentalist	11.1% (1)
Vocalist	22.2% (2)
Both	55.5% (5)
Other	22.2% (2)

What instrument(s) do you play? (N=8)

Guitar	63.5% (5)
Piano	100% (8)
Percussion	37.5% (3)
Bass	37.5% (3)
Other	25% (2)

Do you have formal training in music? (i.e. you have taken music lessons for a sustained period of time or you studied music in school.) (N=9)

Yes	66.6% (6)
No	33.3% (3)

Figure 1.1

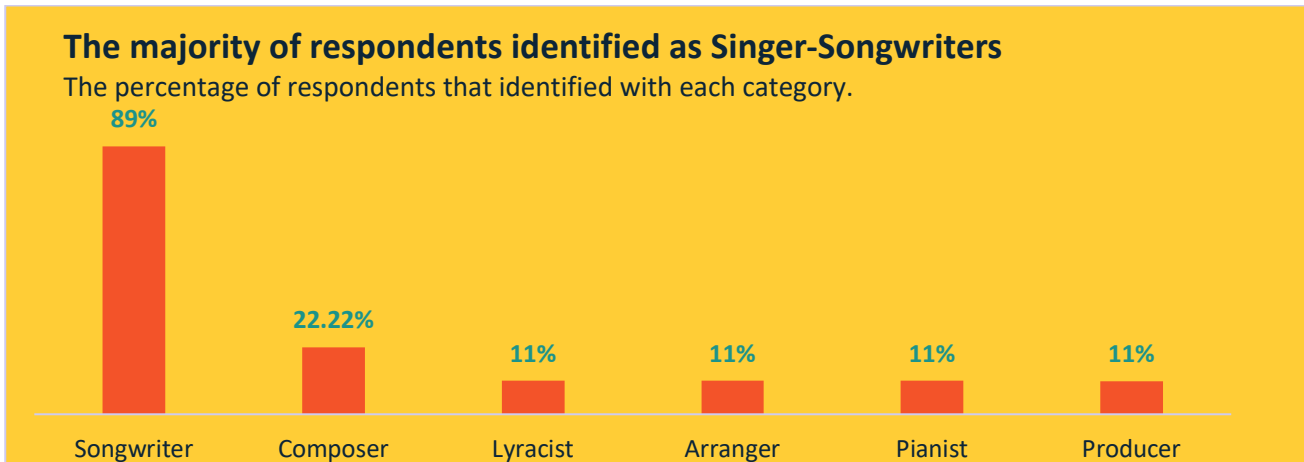


Figure 1.2

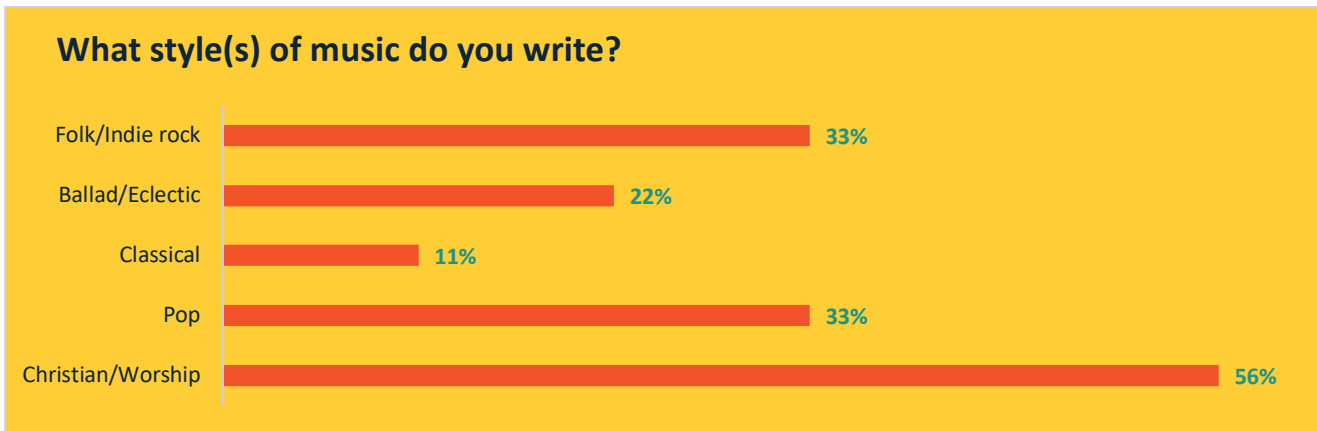


Figure 1.3

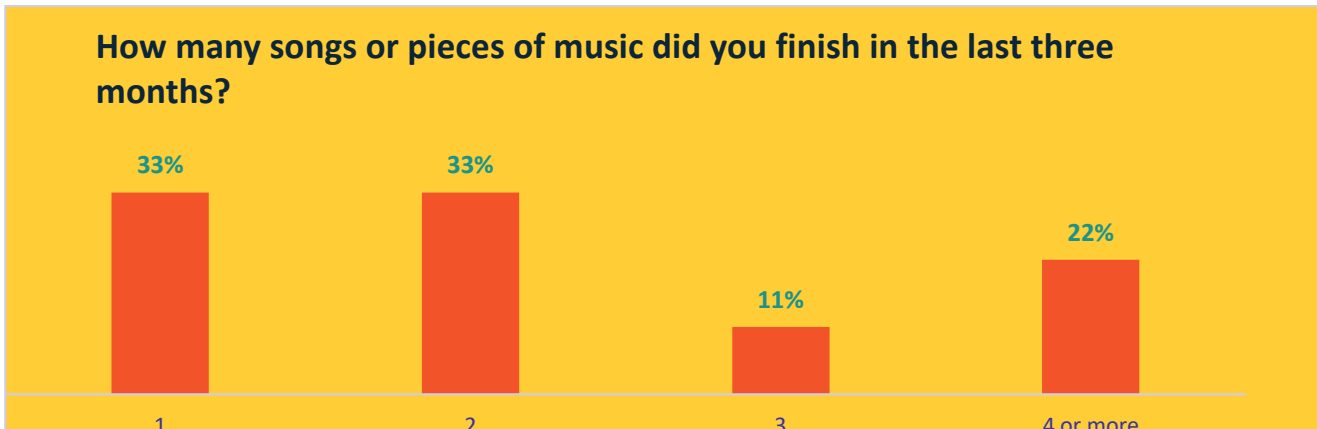


Figure 1.4



THE FOLLOW-UP SURVEY

The follow-up survey asked demographic questions of those respondents who provided contact information. As of the writing of this report, only two of the eight respondents who provided their contact information in the first survey have responded to the demographic information survey. The percentages cited below are based on the number of responses received so far.

When asked “If applicable, what is the approximate number of years you've studied music, via private vocal/instrumental/composition lessons and/or formal school-related training (e.g. middle school band or orchestra through college or graduate level study)?,” 100% responded “5 or more years.” When asked “What is your age?,” 50% responded “30 – 45 years old” and 50% responded “15 – 30 years old.” When asked “How long have you been writing music?” 100% responded “More than 10 years.” When asked “What is your level of education?,” 50% responded “Doctoral degree,” and 50% responded “Master’s degree.” Of the two respondents (so far), one listed their current occupation as “Caregiver, Researcher, Songwriter, Music Producer and engraver” and the other as “Teacher.”

Recommendations/Action

When the author set out on this project, he suspected that there may be a connection between a songwriter’s level of musical training and their ability to finish musical projects. Ultimately, the goal has always been to create a complete curriculum for

songwriters who were either never trained in music or who wish to refresh their musical knowledge and skills, and to create it in such a way as to allow the songwriter to learn the concepts without necessarily forcing them to read musical notation. In order to accomplish this, a baseline foundational module that covers essential musical concepts would be necessary before the songwriter can tackle larger, more complex musical topics.

Though the initial survey used for this report was a broad look at aspects of the songwriters who responded, there are two key pieces of data that, together, strongly suggest the need for this foundational “Essentials of Music” module: the number of pieces completed in the last three months by songwriters with formal musical training was higher for respondents with formal musical training than it was for those without (see Figure 1.4).

Appendix

The initial survey can be found here:

https://docs.google.com/forms/d/e/1FAIpQLSdYLyKaORClSAJf4KSN6PJ8Zhs-ZwHX2gxkviKU0QK7UBXIkA/viewform?usp=sf_link

The follow-up survey can be found here:

https://docs.google.com/forms/d/e/1FAIpQLSfhSzK8zaSKCfR7oSSp2DnsxYt7nrMIHMnXc-l8vSoxbbNpQ/viewform?usp=sf_link

Part II – Analysis Report

Goal Analysis

Aim of Instruction

Based on the results of the previous Needs Assessment, untrained songwriters tend to finish fewer songs than those who have formal training in music; therefore, this instructional unit will aim to teach songwriters the basic terms associated with music, giving them a foundation on which to build and expand their knowledge into more complex musical disciplines such as music theory, arranging, composition, aural skills, and instrumentation.

Initial Goals

- Learn about Pitch
- Learn how to mix different instruments together in your song
- Learn how to stack instruments in your song before mixing
- Understand the meaning of MIDI
- Be able to hear and identify musical intervals
- Learn how musical intervals are built
- Understand Perfect vs. Augmented vs. Diminished Intervals
- Learn about how chords are built
- Learn about key signatures
- Learn how to build different types of scales
- Learn about Rhythm
- Learn about Meter
- Learn how to refine melodies
 - Learn about Retrograde
 - Learn about Retrograde Inversion
 - Learn about Diminution
 - Learn about Augmentation
 - Learn about Truncation
- Learn basics of Counterpoint
- Learn the basics of piano

Refine Goals

- Learn about Pitch
- Understand the meaning of MIDI
- Learn how musical intervals are built
- Understand Perfect vs. Augmented vs. Diminished Intervals
- Learn about how chords are built
- Learn about key signatures
- Learn how to build different types of scales
- Learn about Rhythm
- Learn about Meter
- Learn basics of Counterpoint
- Learn the basics of piano

Rank Goals

1. Learn about Pitch
2. Learn how musical intervals are built
3. Understand Perfect vs. Augmented vs. Diminished Intervals
4. Learn about how chords are built
5. Learn about key signatures
6. Learn how to build different types of scales
7. Learn about Rhythm
8. Learn about Meter
9. Learn basics of Counterpoint
10. Learn the basics of piano
11. Understand the meaning of MIDI

Second Refinement

- Goals 7, 8, 9, 10, and 11 were dropped, as they should likely be given separate attention after this initial foundational “Essentials of Music” course.
- Goals 5 and 6 were combined, as they could be taught together.

Final Ranking

1. Define the term 'Pitch'
2. Build and identify Musical Intervals
3. Describe the difference between Perfect, Augmented, and Diminished Intervals
4. Build and Identify Major and Minor Chords
5. Describe the difference between Rhythm and Meter

Learner Analysis

General Characteristics

Despite the fact that the respondents on the second demographic information survey have prior formal musical training, the fact remains that, per the first survey's results, the number of musical projects completed in the last three months by songwriters with formal musical training was higher than it was for those without (see Figure 1.4 in the Needs Assessment). Therefore, the proposed instructional module must not assume that the learner can read or understand musical notation and symbols, so the module must teach basic musical concepts using alternate methods. If any musical notation or symbols are necessary to illustrate a point, the concept will be explained step-by-step and in detail, as though the learner is starting from the very beginning.

Specific Entry Characteristics & Prior Knowledge

Rather than using musical notation and symbols primarily, the proposed unit will use the MIDI piano roll, which is common tool found in almost all Digital Audio Workstation (DAW) software (e.g. Apple's Logic Pro X, Garageband, Pro Tools, Cubase, etc.). Even if the learner has never seen a MIDI piano roll editor before, certain musical concepts are likely to be easier to explain in this way. Furthermore, given the author's experience with the intended learner, it is far more likely that a songwriter will use a DAW to produce their own music than almost any other kind of software, so using the piano roll as the basis of the curriculum will either meet experienced learners where they are or prepare new learners for their future use of this important tool.

Additional Important Characteristics

Though songwriters who go through this module will be generally open to learning the material, careful attention must be paid to the manner in which the curriculum is

written such that it does not come across as overly academic. Based on the author’s knowledge of this population, those who identify as songwriters tend to be suspicious of learning music theory, as there is a general belief that learning music theory will inhibit one’s creative intuition and result in songs that are stiff, technical exercises.

To overcome this, the author suggests repeated reminders throughout the module connecting the content to the intended end-result: writing songs more quickly and efficiently than before. It is also strongly suggested that examples of musically trained songwriters and producers be found to keep the learner focused on this end goal while they progress through the content.

Contextual Analysis

Orienting Context

Given that one of the top frustrations cited by respondents in the initial survey of the Needs Assessment—regarding songwriting or writing music in general—was “Finishing,” and given that we can see a connection between the number songs finished and one’s level of musical training, it would not be difficult to convince songwriters to see the benefit of this instructional module. That said, it is still more likely that this module will only attract those who have a strong internal felt need to become better at their craft.

Also, given the author’s knowledge of songwriting and music production culture, there is a heavy emphasis right now on the idea that one should learn and practice all parts of the songwriting process. That is, songwriters should not only write and record their own music; they should also learn about the business side as well (how to pitch their songs, get their music on the radio, etc.). Because of this, and because quality of output is incredibly important, most songwriters would likely see the benefit in learning more about music composition, arranging, instrumentation, and aural skills. Those who are serious about their craft will know that spending time learning these disciplines can only help them.

Instructional Context

Students will be able to access this instructional unit on any kind of device with a screen that can connect to the internet via a traditional internet browser (e.g. a

laptop, smartphone, tablet, desktop computer, etc.). The instructional unit will be a self-paced interactive PowerPoint module, embedded on a website, and it will take the user approximately 15 to 20 minutes to complete. Students will be able to access and refer to the module at any time, and if they have trouble accessing it, the author will be available via email and can send the file to the learner as an email attachment.

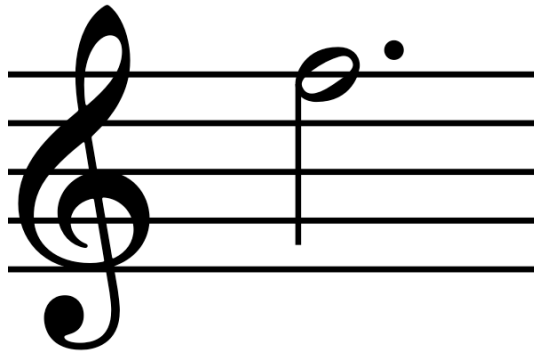
Transfer Context

When a learner completes this module, they should have an ample foundation to move into more advanced courses on music composition, arranging, instrumentation, and aural skills. The learner will not leave this module instantly able to finish every musical project they start; the idea is that becoming a trained musician takes time, and one must start with a general knowledge of important terms and concepts before moving on to higher-level material. It is recommended that learners who complete this module review the content regularly until they feel comfortable defining each term and explaining it from memory before taking another more advanced course. The learner should also look for opportunities to incorporate the terms from the module into every-day writing and recording sessions, so they become apart of the learner's vocabulary.

Part III – Topical Task Analysis

1. Define the term *Pitch*

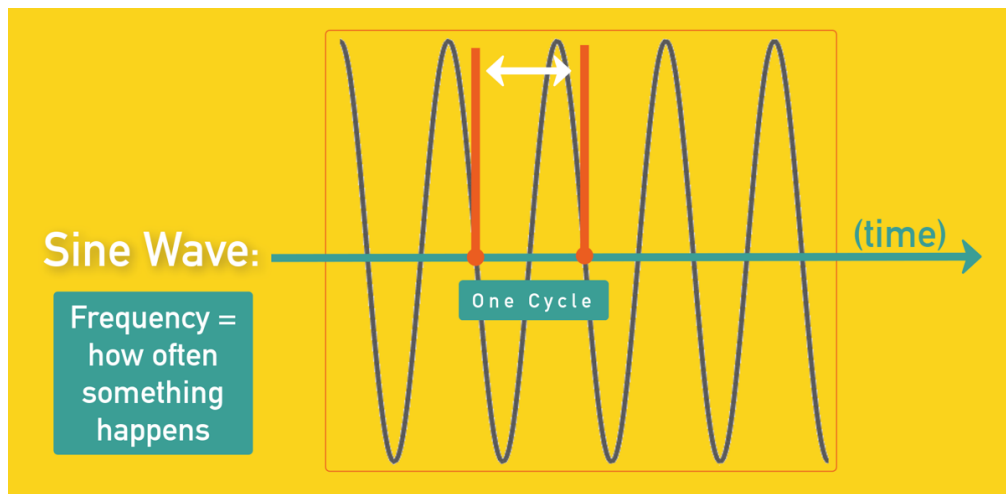
- a. When a musician uses the term *pitch*, they are usually referring to a musical *note*.
- b. A musical *note* is a nominal or visual representation of a single *pitch*, as shown in the example below:



- c. In general, *pitch* refers to the relative ‘highness’ or ‘lowness’ of a sound, not in terms of amplitude (i.e. volume) but in terms of *frequency*.
- d. What is *frequency*?
 - i. Movement of air molecules vibrating your ear drum is interpreted by your brain as sound. How quickly or slowly these vibrations move the eardrum determines how high or low our brains interpret the sounds we hear. These vibrations can be visualized as a waveform. We’ll look at the simplest kind of waveform, that of a sine wave.



- ii. In the simplest terms, *frequency* refers to how often something happens.
- iii. In this visualization, *frequency* is simply how many complete cycles of the waveform can take place within each second (also known as Hertz or Hz).



- iv. As we move from a higher frequency to a lower frequency, there are fewer cycles displayed in our waveform.
 - v. In other words, our eardrums are resonating with the sound at a lower rate, resulting in what we hear as a lower pitch or note.
 - vi. Eventually, if we kept going lower and lower, we would cease to actually hear the note, even if the vibration is still happening. The same would be true if we went higher and higher. This is because humans generally cannot hear any sounds below 20 Hz or above 20,000 Hz.
- e. One practical way to think of this is with a very common phrase used in music: When someone states that another person is playing or singing “off pitch,” “off key,” or “out of tune,” what they actually mean is that their brain was expecting to hear a note or series of notes (i.e. pitches) as one frequency or frequencies, but an entirely different set of frequencies was heard.

-
- f. Therefore, a *pitch* is a note, which is a frequency or vibration of air molecules.

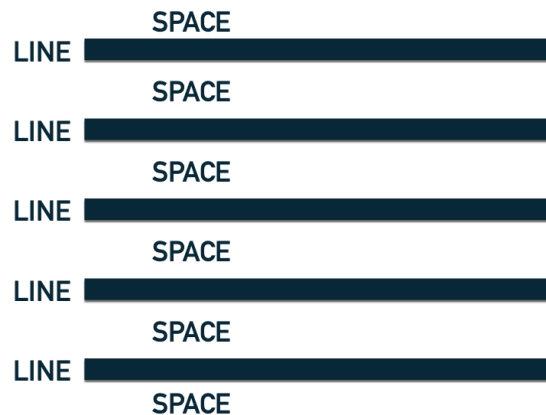
2. Build and identify Musical Intervals

1. Intervals are named according to their quality and number. For example, a Major Second or Perfect Fifth.

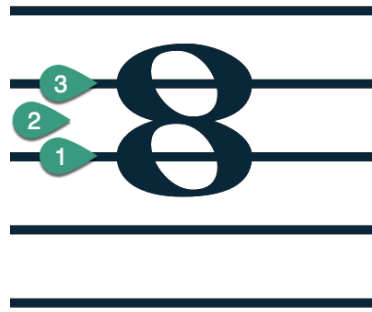
Major **Second**
(quality) (number)

Perfect **Fifth**
(quality) (number)

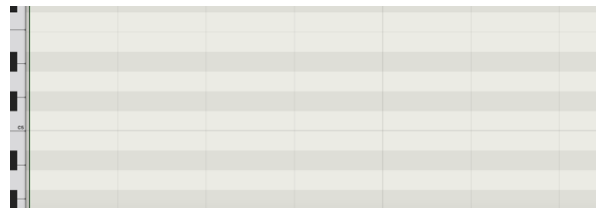
2. The number in an interval is easiest to illustrate by taking a look at the musical staff:



3. The musical staff is comprised of five lines and four spaces.
4. To determine the number portion of your interval, simply count the number of lines and spaces on the staff starting with the bottom note and move up.
5. For this example, we start counting from the bottom note, which occupies a line, and count each line and space until we land on the top note. 1. 2. 3. OK, so we're looking at an interval of some type of third (3rd).



6. What is the quality of this third? Intervals of a third are generally either major or minor, so which is the one above? This answer is impossible to determine from the five lines and four spaces of the staff without also knowing two things:
 1. Clef (such as treble clef or bass clef)
 2. Key Signature (in other words, the collection of sharps or flats -- or neither, which tells us our key).
7. This information is out of the scope of this module but suffice it to say that the clef and key signature combined tell us the exact pitches we're seeing on our staff, making it easy to tell what kind of a third we're looking at.
8. Instead, let's use a basic MIDI Piano Roll editor to explain how to determine the type of third we're looking at.

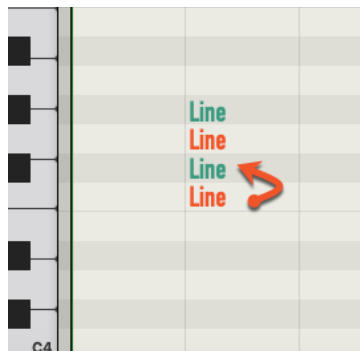


9. Even if you've never used a MIDI Piano Roll editor to create music, most songwriters will use a MIDI Piano Roll to create a sequence music before they will work with directly with musical notation. In addition, it is easier to explain intervals using the MIDI Piano Roll editor.
10. What is the smallest musical interval? A minor second. A minor second is also known as a half step or semitone.

-
- 11.** For quick reference, the easiest way to think about this is that a minor second is the same as the distance between two immediately adjacent keys on a piano keyboard or frets on a guitar fretboard.



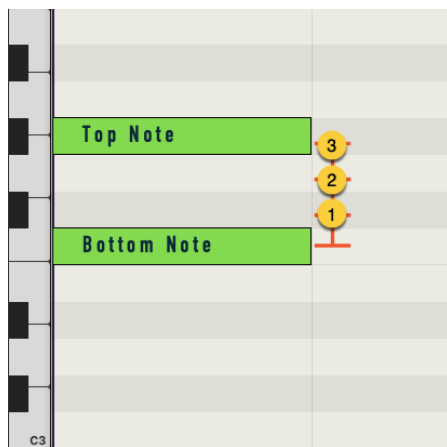
- 12.** On the piano roll in our recording software, it's the same thing: a minor second is just the distance between two immediately adjacent lines.



- 13.** So, to return to our last example, the third, the easiest way for us to determine the type of third is to count the number of half steps required to get us from the bottom note to the top note.

14.Example:

1. For reference, three half-steps are equal to a Minor Third; always, and no matter where we begin on the keyboard.



2. We can build a Major Third by increasing our interval count by one half-step. So, four half-steps make a Major Third—again, no matter where we begin on the keyboard.



15. To see a summary of the basic intervals that can be created by going up the piano keyboard from a starting pitch, see the following diagram:

Count half-steps to build intervals.

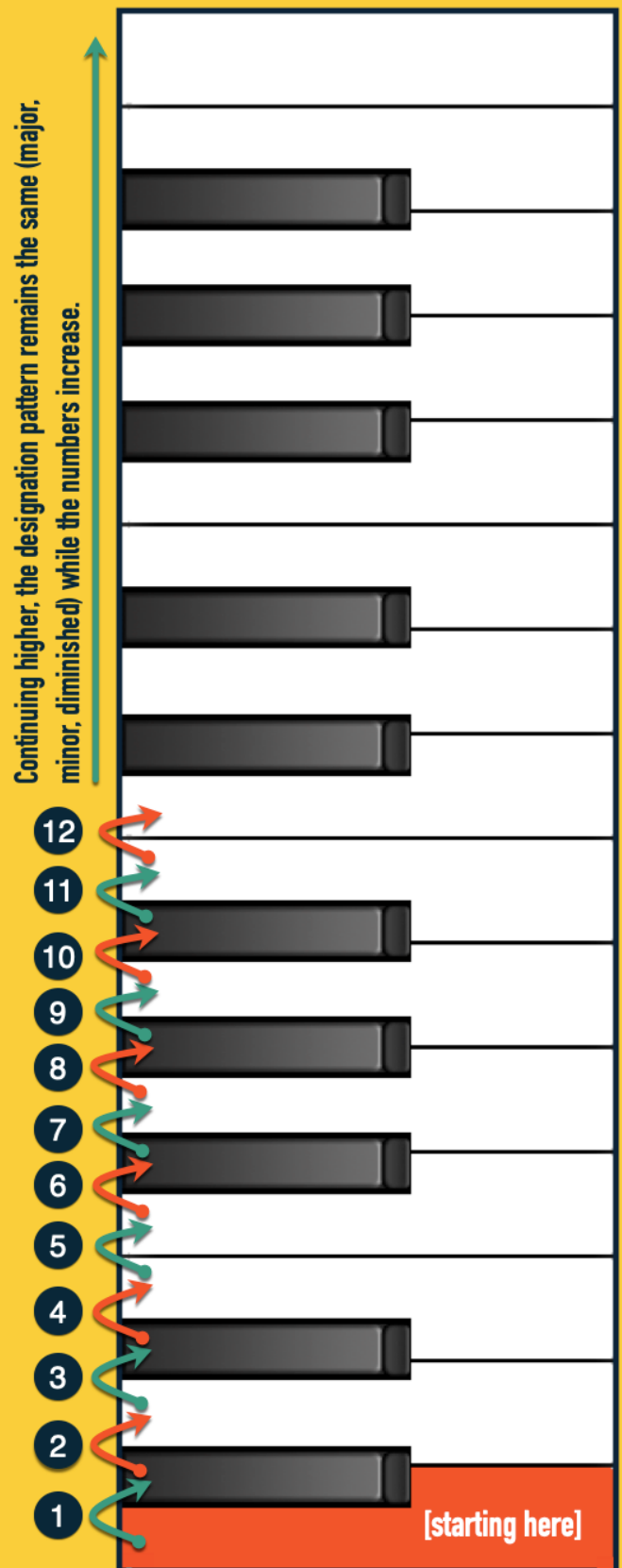
A half-step (minor 2nd) = the distance between two consecutive notes on a keyboard.

To calculate your interval, start with the lowest note and count half-steps until you reach the second note.

Number of half-steps away from starting note:

- 1 = Minor 2nd (m2)
- 2 = Major 2nd (M2)
- 3 = Minor 3rd (m3)
- 4 = Major 3rd (M3)
- 5 = Perfect 4th (P4)
- 6 = Diminished 5th (dim5)
- 7 = Perfect 5th (P5)
- 8 = Minor 6th (m6)
- 9 = Major 6th (M6)
- 10 = Minor 7th (m7)
- 11 = Major 7th (M7)
- 12 = Perfect 8th (P8 or Octave)

hitsongdesign 



3. Describe the difference between Perfect, Augmented, and Diminished Intervals

- a. The names of intervals are conventions that arose from ancient Greece. The Greeks were fascinated by the mathematical representations of musical intervals and wrote extensively about them. However, we're not going to get into the reasons for the names, as it is a bit too much information for our purposes here.
- b. The term 'Perfect' is applied to regular intervals of a fourth, fifth, octave (eighth), and unison (the same pitch side-by-side). By "regular," we mean any naturally-occurring, unaltered intervals of fourth, fifth, octave, or unison; for example, from the pitch C to the pitch G is a perfect 5th (P5). From the pitch C to the pitch F is a perfect 4th (P4), and so on.
- c. See the chart in the previous unit (Build and identify Musical Intervals) for the exact number of half-steps needed to for a Perfect 4th (P4), Perfect 5th (P5), and Perfect 8th (octave).
- d. Augmented intervals, as the name implies, are intervals that have been expanded. More specifically, Augmented intervals occur when Perfect or Major intervals are expanded by a half step (usually the top note is moved up).
- e. Conversely, Diminished intervals are intervals that have been contracted by a half step (usually the top note is moved down).
- f. Here's a summary:
 - i. Major-Minor intervals can be Augmented (from the major end) and Diminished (from the minor end)

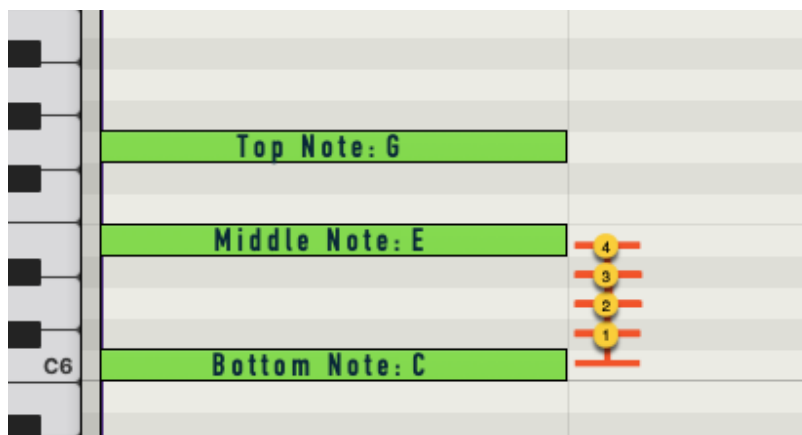
Diminished - Minor - Major - Augmented
 - ii. Perfect intervals can be either Augmented or Diminished.

Diminished - Perfect - Augmented

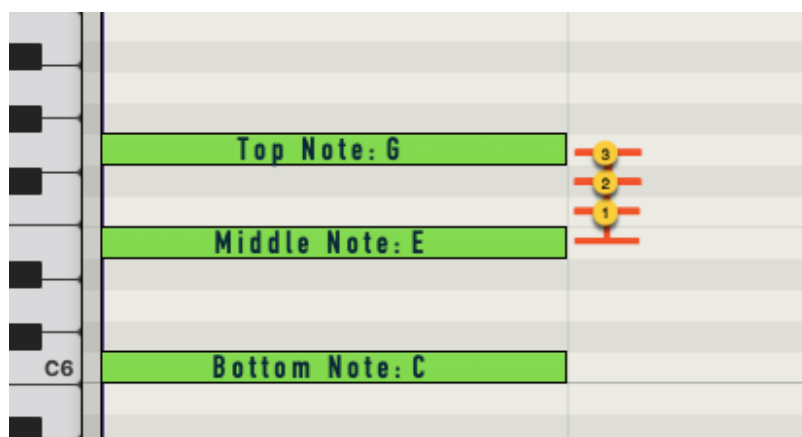
4. Build and Identify Major and Minor Chords

- a. Chords in music are nothing more than stacked intervals of thirds.
- b. For example, a C Major chord is built by stacking a Major Third interval on the bottom (with C as its lowest note) and a Minor Third on top. In other

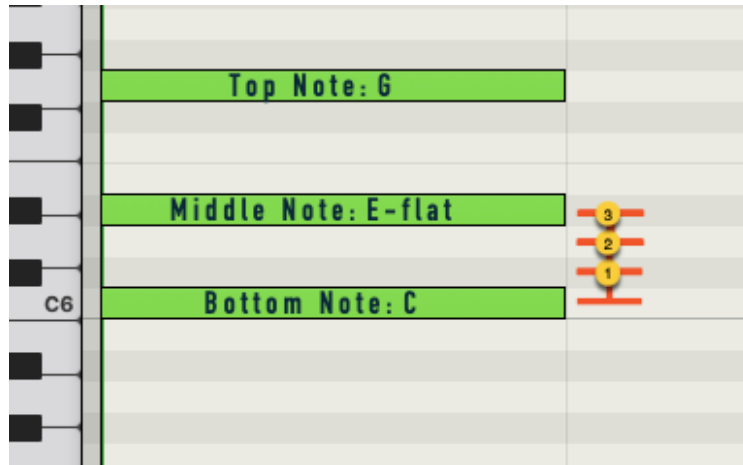
words, starting on any C, count up by half-steps as before until you get to the fourth half-step.



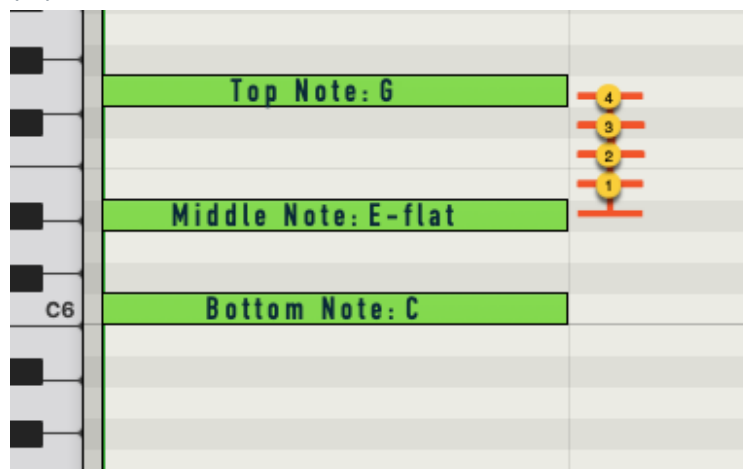
- c. Next, from the note you just landed on (E), count up from there three half steps:



- d. So, the three notes of our C Major chord (starting from the bottom) are C, E, and G.
- e. To build a C Minor chord, do the opposite: minor chords are always built with a Minor third on the bottom and a Major third on top.
- f. So, just reverse the order of the previous instructions: starting on C (as always, for any C chord), count up three half-steps to give you the second pitch in our chord (E-flat).



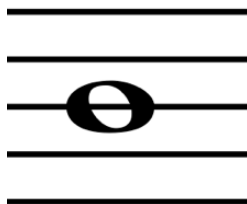
- g. Next, count up from there four half-steps to give you the final pitch in our chord (G).



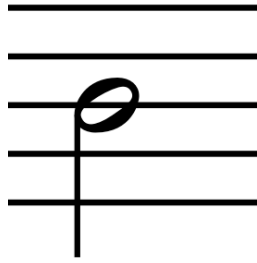
5. Describe the difference between Rhythm and Meter

- a. Before we can talk about Rhythm and Meter in general, we need to talk about a few rhythmic note values. The rhythmic value of a note refers to its length in terms of time. There are a few common rhythmic note values we will cover here (there are many more!):

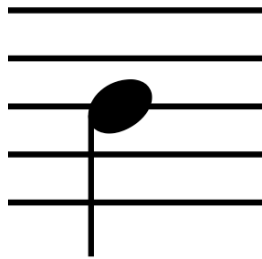
1. Whole note



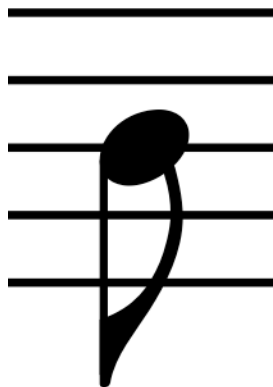
2. Half note



3. Quarter note



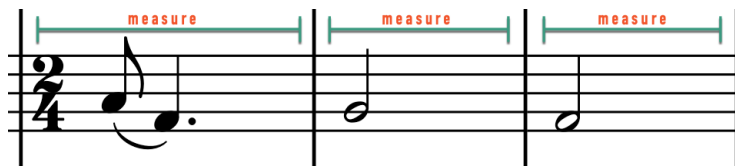
4. Eighth note



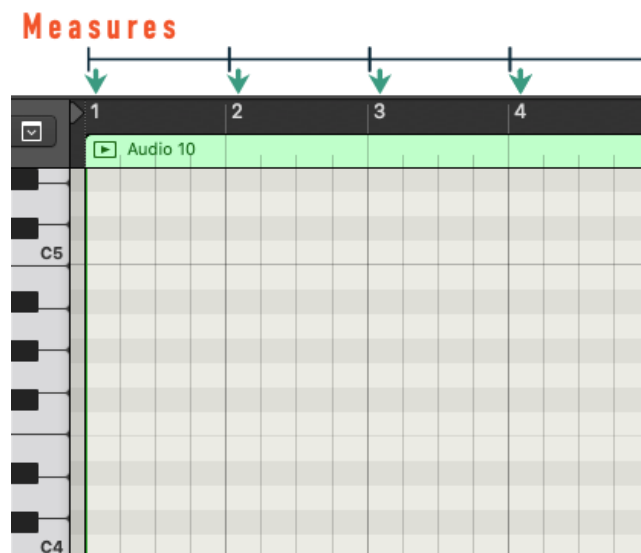
- b.** Though we have included the above rhythmic note values in traditional notation, we will continue our explanation of their meaning using the MIDI piano roll editor, as in previous examples.
- c.** How long the above rhythmic values actually last in terms of time depends on your music's **tempo**. Tempo refers to how fast the music is played, usually specified in beats per minute (BPM). For quick reference, 60 beats per minute means that each beat of the music lasts exactly one second.
- d.** **Meter** is the same as time signature. One of the most common time signatures is $\frac{4}{4}$.

- e. Time signatures are always built like the above example, one number on top of another, but what do these numbers mean?
- f. The top number refers to how many beats the music contains within each measure, and the bottom number tells us what kind of rhythmic note value gets the beat.
 1. What is a measure? Answer: measures are essentially recurring blocks of time within which a set number of beats occur. These beats move at the speed of the music's tempo.

Measures in traditional notation:

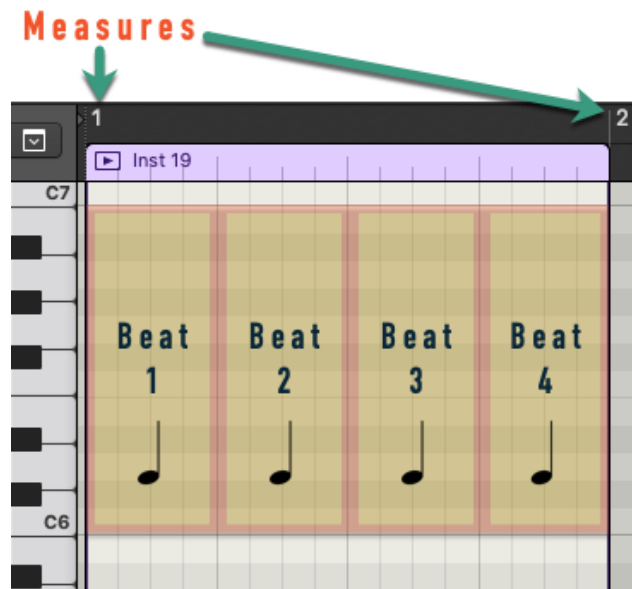


Measures in a MIDI Piano Roll Editor:



2. When we say that 'the bottom number tells us what kind of rhythmic note gets the beat,' this refers to a specific rhythmic note value, as introduced at the beginning of this unit. In other words, a time signature of $\frac{4}{4}$ tells us that there are four beats in every measure and that the quarter note gets the beat.

Here is what this looks like in a MIDI Piano Roll Editor:



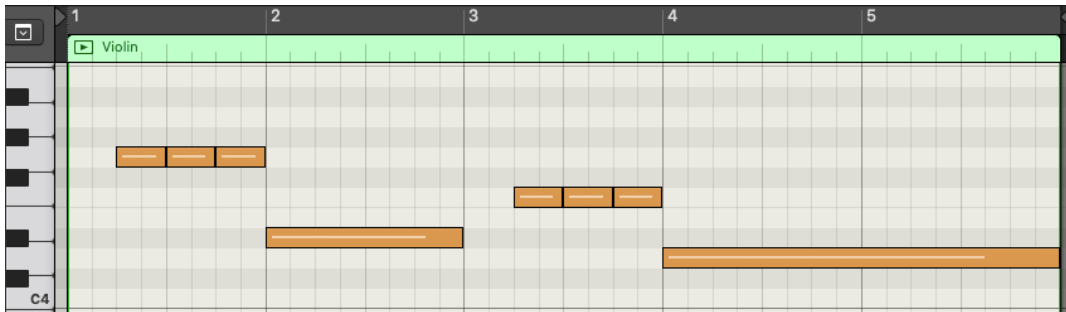
- g. Here are some other example time signatures with an explanation of each:
- $\frac{3}{4}$: three beats in each measure, with beats on each quarter note.
 - $\frac{6}{8}$: six beats in each measure, with beats on each eighth note.
 - $\frac{3}{2}$: 3 beats in each measure, with beats on each half note.
- h. If meter is the time-keeping backbone of the music—a grid of sorts—**rhythm** is how our music actually plays out temporally over that grid.
- i. For example, let's take a look at the opening 5 measures of the violin part from the first movement of Beethoven's 5th Symphony:

Traditional notation:

Allegro con brio $\text{♩} = 108$

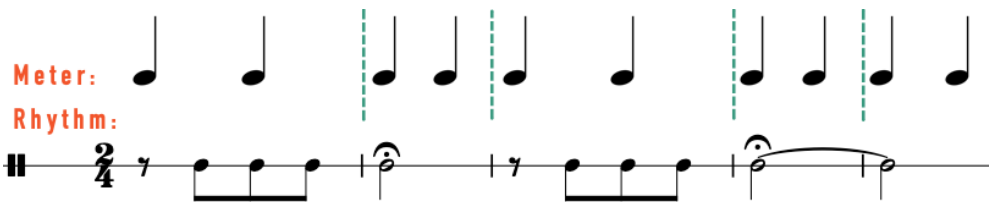
Violin

MIDI Piano Roll Editor:



- j. From the traditional notation example above, we can see that our time signature (or meter) is $\frac{2}{4}$.
- k. This means that each measure contains two (2) beats, and each beat lasts the length of one quarter note.
- l. The rhythm of this short excerpt, therefore, is the juxtaposition and placement of the actual notes in our music (including their time values) over the meter.

Traditional notation:



MIDI Piano Roll Editor:

Measures

Meter →

Rhythm →

Part IV – Performance Objectives & Assessment Items

Given the previous Goal and Task analyses, clear performance objectives must be defined for each goal. The content for these objectives is classified by type and by whether the learner will be required to recall facts or apply what they have learned. Finally, measurable assessment questions must then be written such that the learner is tested on material that clearly aligns with each objective.

Goal 1: Define the term ‘Pitch’

Performance Objective	Classification	Assessment Items
Objective 1.1: Given several possible definitions, the learner will be able to distinguish between <i>pitch</i> and <i>frequency</i> .	<i>Concept</i> --- <i>Application</i>	Pitch in music can be defined as: a. The relative ‘highness’ or ‘lowness’ of a sound, not in terms of amplitude (i.e. volume) but in terms of <i>frequency</i> . b. The color of displayed notes in our MIDI Piano Roll Editor. c. The relative loudness of a sound. d. How in- or out-of-tune someone sounds while singing a tune. [Answer: a]
		Frequency in music can be defined as: a. The number of beats in a measure. b. How often something happens; regarding sound, how quickly or slowly air molecules vibrate our ear drum, usually measured in Hertz (Hz). c. How in- or out-of-tune someone sounds while singing a tune. d. One cycle of a waveform [Answer: b]

Goal 2: Build and identify Musical Intervals

Performance Objective	Classification	Assessment Items
<p>Objective 2.1: Given an example with two stacked notes on a Piano MIDI Roll Editor, the learner will be able to identify the displayed interval.</p>	<p><i>Procedure</i> --- <i>Application</i></p>	<p>Using the chart provided in Figure 2.1a, identify the interval displayed in Figure 2.1b:</p> <ul style="list-style-type: none"> a. Perfect 5th b. Major 3rd c. Minor 2nd d. Major 7th <p>[Answer: b]</p>
		<p>Using the chart provided in Figure 2.1a, identify the interval displayed in Figure 2.1c:</p> <ul style="list-style-type: none"> a. Perfect 5th b. Major 3rd c. Major 6th d. Minor 3rd <p>[Answer: d]</p>

Figure 2.1a:

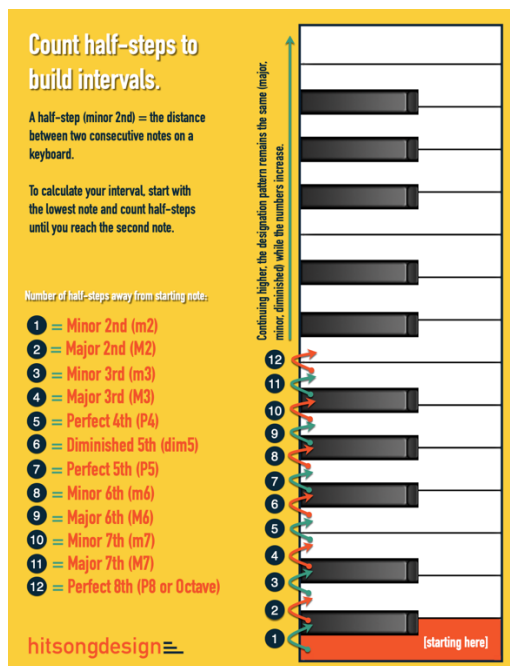


Figure 2.1b:

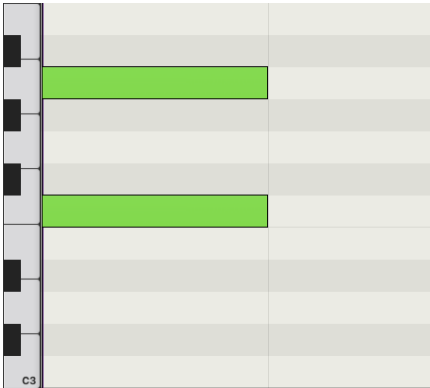
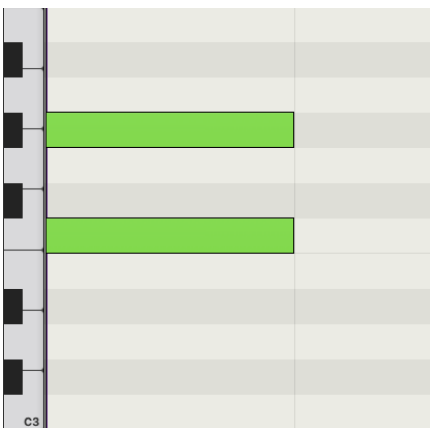


Figure 2.1c:



Goal 3: Describe the difference between Perfect, Augmented, and Diminished Intervals

Performance Objective	Classification	Assessment Items
Objective 3.1: Given a list of raw number portions of intervals, the learner will be able to identify them as 'Perfect' or not.	<i>Fact</i> --- <i>Recall</i>	True or False: Unaltered 5 th intervals are always described as 'Perfect.' [Answer: True]
		True or False: Unaltered 4 th intervals are always described as 'Major.' [Answer: False]
		True or False: Intervals of an 8 th and unison are described as 'Perfect.' [Answer: True]
Objective 3.2: Given an interval number and quality, the learner will be	<i>Fact</i> --- <i>Recall</i>	When expanding the top note in a Major 3rd interval by one half-step,

<p>able to identify its expanded names.</p>		<p>the new name we assign to the interval is:</p> <ul style="list-style-type: none"> a. Augmented 3rd b. Diminished 3rd c. Super Major 3rd d. Major+ 3rd <p>[Answer: a]</p>
		<p>When expanding the top note in a Minor 2nd interval by one half-step, the new name we assign to the interval is:</p> <ul style="list-style-type: none"> a. Augmented 2nd b. Diminished 2nd c. Minor+ 2nd d. Major 2nd <p>[Answer: d]</p>
<p>Objective 3.3: Given an interval number and quality, the learner will be able to identify its contracted names.</p>	<p><i>Fact</i> --- <i>Recall</i></p>	<p>When contracting the top note in a Perfect 5th interval by one half-step, the resulting quality we assign to the interval is:</p> <ul style="list-style-type: none"> a. Augmented 5th b. Diminished 5th c. Minor+ 5th d. Major 5th <p>[Answer: b]</p>
		<p>When contracting the top note in a Perfect 4th interval by one half-step, the resulting quality we assign to the interval is:</p> <ul style="list-style-type: none"> a. Augmented 4th b. Diminished 4th c. Minor+ 4th d. Major 4th <p>[Answer: b]</p>

Goal 4: Build and Identify Major and Minor Chords

Performance Objective	Classification	Assessment Items
Objective 4.1: Given an example of three stacked notes on a Piano MIDI Roll Editor, the learner will be able to solve whether what they see is a major or minor chord.	<i>Procedure</i> --- <i>Application</i>	True or False: The chord displayed in Figure 4.1a is a major chord. [Answer: True]
		True or False: The interval displayed in Figure 4.1b is a major chord. [Answer: False]

Figure 4.1a:

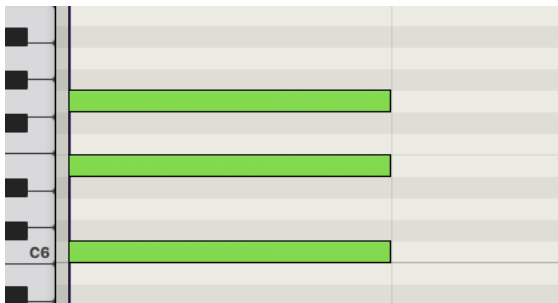
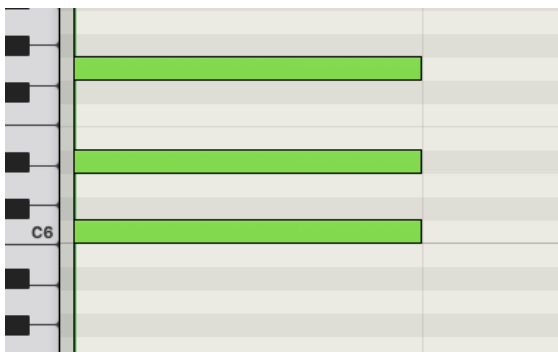


Figure 4.1b:

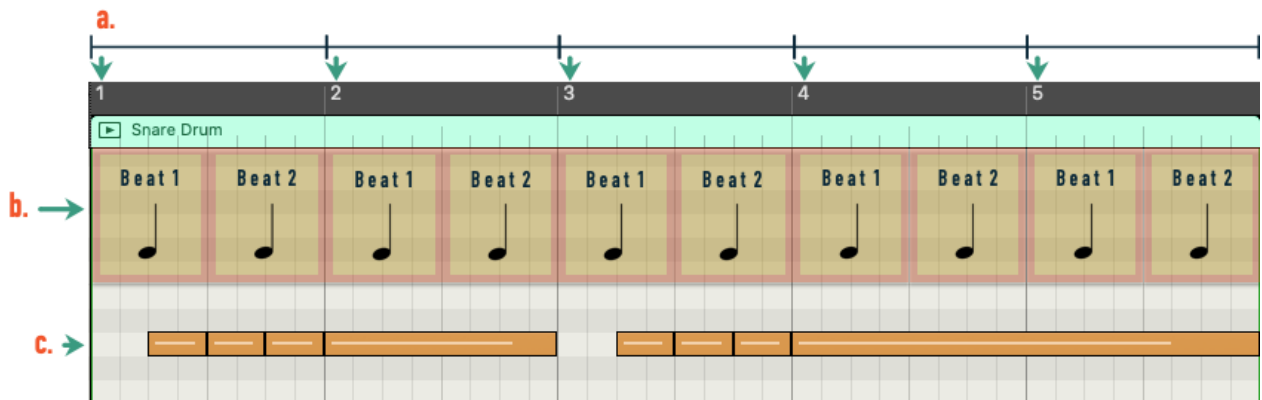


Goal 5: Describe the difference between Rhythm and Meter

Performance Objective	Classification	Assessment Items
Objective 5.1: Given a time signature, the learner will be able to identify what the top number means and what the bottom number means.	<i>Concept</i> --- <i>Recall</i>	In this time signature $\frac{3}{4}$, the number 3 denotes: <ol style="list-style-type: none"> Triplets get the beat There are three beats in every quarter note. Repeat each measure three times

		<p>d. There are three beats in every measure [Answer: b]</p>
		<p>In this time signature $\frac{4}{4}$, the bottom number tells us:</p> <p>a. There are four beats in every measure. b. There are four beats in every quarter note. c. The quarter note gets the beat. d. There are four measures per line. [Answer: c]</p>
<p>Objective 5.2: Given a musical example on the MIDI Piano Roll Editor, the learner will be able to distinguish between measures, rhythm, and possible meter (time signature).</p>	<p><i>Fact</i> --- <i>Recall</i></p>	<p>In figure 5.2, a represents:</p> <p>a. Measures b. Meter c. Rhythm d. Beats [Answer: a]</p>
		<p>In figure 5.2, b represents:</p> <p>a. Measures b. Eighth notes c. Rhythm d. Meter [Answer: d]</p>
		<p>In figure 5.2, c represents:</p> <p>a. Measures b. Meter c. Beats d. Rhythm [Answer: d]</p>

Figure 5.2:



Part V – Instructional Strategy Plan

Description of Sequencing

This unit consists of five goals that cover the most basic information that a songwriter would need to know in order to begin to understand 3 of the most important concepts in music: Melody, Harmony, and Rhythm. The first goal explores ‘Pitch,’ which must be learned before one can even begin to understand Melody and Harmony. The second goal covers ‘Intervals,’ which is the next logical step in the sequence of topics, as this knowledge can be used to describe the vertical distance between pitches. The next goal explores more complex intervallic ideas: Major vs. Minor, Perfect, Augmented, and Diminished. After the learner has a basic understanding of intervals, Goal 4 introduces two basic chords: Major and Minor–this knowledge is a natural next step after mastering the basics of intervals (chords are nothing more than stacked intervals-of-thirds). Finally, Goal 5 moves from pitch-related content into the temporal domain to describe Meter and Rhythm, which must be understood before the concept of Melody can be learned. In summary, these five goals are sequenced in such a way as to introduce the most basic pre-requisite information needed to understand Melody, Harmony, and Rhythm, and should make it possible for the songwriter to take more advanced courses in music theory.

Rationale for Sequencing Method

The Posner and Strike (1976) Learner-Related sequencing scheme will be used as the rationale for this unit. More specifically, the unit will guide the learner through the content based on difficulty, which “prescribe[s] teaching the easier tasks first” (Morrison et al., 2013, p. 131). Based on the results of the Needs Assessment, songwriters who have no formal training in music tend to finish fewer projects, so it is important to assume the learner has no prior knowledge of music. From there, the learner progresses through each section (goal), allowing them to build on previous knowledge as they go along.

Pre-Instructional Strategy

The Pre-Instructional Strategy for this unit will consist of the use of Objectives and an Overview. The objectives, which will essentially be a list of the objectives from each goal in this unit, will be written out after the overview. The overview will explain—in the simplest terms—what the learner will gain by going through the unit, and will highlight the most important finding of the Needs Assessment: the fact that musicians with more musical training tended to report finishing more musical projects than those without musical training. This information will hopefully motivate the learner to engage more fully with the unit’s content.

Goal 1: Define the term ‘Pitch’

Objective 1.1: Given several possible definitions, the learner will be able to distinguish between *pitch* and *frequency*. (Concept/Application)

Initial Presentation: RUL-EG. At the outset of this section, the learner will be presented with a single, traditional quarter note with the statement: “A pitch is a note.” Though this is a somewhat over-simplified definition, the idea is to draw an immediate connection between the way that most musicians actually use the term ‘pitch,’ and then to connect it with the more complex concept of ‘frequency’ later in the section.

Generative Strategy: Ask the learner to identify the highest and lowest pitches on a list of frequencies displayed in Hz.

Learner Practice Item: True or False: The higher the pitch, the lower the frequency.

(Correct answer: False)

Goal 2: Build and identify Musical Intervals

Objective 2.1: Given an example with two stacked notes on a Piano MIDI Roll Editor, the learner will be able to identify the displayed interval. (*Procedure/Application*)

Initial Presentation: RUL-EG. Show several examples of musical intervals with their abbreviations:

- Major Third (M3)
- Minor Second (m2)
- Perfect 5th (P5)

Generative Strategy: After covering the basics of calculating musical intervals, the learner will calculate their own, both by being asked to state the number of minor seconds needed to reach a specific interval (e.g. Major Seventh) and by naming the interval represented by a specified number of minor seconds (e.g. What interval can be built by moving seven minor seconds above or below our starting pitch?).

This chart will be used:

Count half-steps to build intervals.

A half-step (minor 2nd) = the distance between two consecutive notes on a keyboard.

To calculate your interval, start with the lowest note and count half-steps until you reach the second note.

Number of half-steps away from starting note:

- 1 = Minor 2nd (m2)
- 2 = Major 2nd (M2)
- 3 = Minor 3rd (m3)
- 4 = Major 3rd (M3)
- 5 = Perfect 4th (P4)
- 6 = Diminished 5th (dim5)
- 7 = Perfect 5th (P5)
- 8 = Minor 6th (m6)
- 9 = Major 6th (M6)
- 10 = Minor 7th (m7)
- 11 = Major 7th (M7)
- 12 = Perfect 8th (P8 or Octave)

hitsongdesign

Learner Practice Item: True or False: Musical intervals are named according to their quality (major, minor, perfect, augmented, diminished) and a number.

(Correct answer: True)

Goal 3: Describe the difference between Perfect, Augmented, and Diminished Intervals

Objective 3.1: Given a list of raw number portions of intervals, the learner will be able to identify them as 'Perfect' or not. (Fact/Recall)

Initial Presentation: RUL-EG. Using this list, the intervals described as 'Perfect' will be highlighted (both the named intervals and the actual piano keyboard notes).

Count half-steps to build intervals.

A half-step (minor 2nd) = the distance between two consecutive notes on a keyboard.

To calculate your interval, start with the lowest note and count half-steps until you reach the second note.

Number of half-steps away from starting note:

- 1 = Minor 2nd (m2)
- 2 = Major 2nd (M2)
- 3 = Minor 3rd (m3)
- 4 = Major 3rd (M3)
- 5 = Perfect 4th (P4)
- 6 = Diminished 5th (dim5)
- 7 = Perfect 5th (P5)
- 8 = Minor 6th (m6)
- 9 = Major 6th (M6)
- 10 = Minor 7th (m7)
- 11 = Major 7th (M7)
- 12 = Perfect 8th (P8 or Octave)

hitsongdesign

Generative Strategies: Ask the learner to list all of the numbers that are not considered 'Perfect' on a separate piece of paper.

Learner Practice Item: Multiple Choice: The following unaltered interval numbers are always described as 'Perfect:'

- a. 7, 9, 3, and 5
- b. 1, 4, 5, and 8
- c. 2, 4, 6, and 1
- d. 8, 7, 3, and 4

Objective 3.2: Given an interval number and quality, the learner will be able to identify its expanded names. (*Fact/Recall*)

Initial Presentation: RUL-EG. The following will be shown to the learner at the outset of this section:

Major-Minor intervals can be Augmented (from the major end) and Diminished (from the minor end)

Diminished - Minor - Major - Augmented

Perfect intervals can be either Augmented or Diminished.

Diminished - Perfect - Augmented

Generative Strategies: The learner will first be asked to try and recall which intervals are considered Major-Minor and which are considered Perfect by writing these on a separate piece of paper. Next, they will be asked to write out the expanded name for each interval on that same piece of paper.

Learner Practice Items:

- True or False: Intervals described as ‘Major’ can never be ‘Augmented.’
(Correct answer: False)
- True or False: Expanded ‘Perfect’ intervals are always described as ‘Augmented.’
(Correct answer: True)

Objective 3.3: Given an interval number and quality, the learner will be able to identify its contracted names. (*Fact/Recall*)

Initial Presentation: RUL-EG. The following will be shown to the learner at the outset of this section:

Major-Minor intervals can be Augmented (from the major end) and Diminished (from the minor end)

Diminished - Minor - Major - Augmented

Perfect intervals can be either Augmented or Diminished.

Diminished - Perfect - Augmented

Generative Strategies: The learner will first be asked to try and recall which intervals are considered Major-Minor and which are considered Perfect by writing these on a

separate piece of paper. Next, they will be asked to write out the contracted name for each interval on that same piece of paper.

Learner Practice Items:

- True or False: Intervals described as ‘Major’ can never be ‘Diminished.’
(Correct answer: False)
- True or False: Intervals described as ‘Perfect’ can never be ‘Minor.’
(Correct answer: True)

Goal 4: Build and Identify Major and Minor Chords

Objective 4.1: Given an example of three stacked notes on a MIDI Piano Roll Editor, the learner will be able to solve whether what they see is a major or minor chord.
(Procedure/Application)

Initial Presentation: RUL-EG. The learner will be presented with two chords on the MIDI Piano Roll Editor, one major and one minor.

Generative Strategy: After playing the two chords shown at the beginning of the section, the learner will be told something to the following effect: “When young students begin taking music lessons or classes, they are typically taught that major chords evoke a feeling of happiness and minor chords evoke a feeling of sadness. Whatever your feeling about how these chords sound, hopefully you can tell a difference between the two. Can you think of any moments in a song where the songwriter used a major chord or a minor chord? List at least one example of each on a separate piece of paper.”

Learner Practice Items:

- True or False: Major chords always have a minor third on the top.
(Correct answer: True)
- True or False: Minor chords always have a minor third on the bottom.
(Correct answer: True)

Goal 5: Describe the difference between Rhythm and Meter

Objective 5.1: Given a time signature, the learner will be able to identify what the top number means and what the bottom number means. *(Concept/Recall)*

Initial Presentation: The learner will be presented with several time signatures, be told that time signature is the same as ‘Meter,’ and will be introduced to 4 different note rhythmic values before being told exactly what the numbers mean in a time signature.

Generative Strategy: When presented with a time signature, the learner will be asked to identify how many beats are in each measure and what kind of rhythmic note value gets the beat.

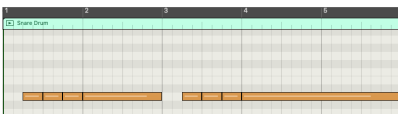
Learner Practice Items:

- True or False: The top number in a time signature denotes the number of beats in each measure.
(Correct answer: True)
- True or False: The bottom number in a time signature denotes the type of note (rhythmic value) that gets the beat.
(Correct answer: True)

Objective 5.2: Given a musical example on the MIDI Piano Roll Editor, the learner will be able to distinguish between measures, rhythm, and possible meter (time signature). *(Fact/Recall)*

Initial Presentation: The learner will first be given the definitions with some examples of measures, rhythm, and tempo.

Generative Strategy: On a PDF printout, the learner will be asked to physically label the measures, notated rhythm, and possible meter of a musical example.



Learner Practice Items:

- True or False: If meter is the time-keeping backbone of the music—a grid of sorts—measures are how our music actually plays out temporally over that grid.
(Correct answer: False)

Design Plan Matrix

Design Sequence	Description	Objective	Estimated Time	Instructional Strategy
Pre-Instructional Strategy	<ul style="list-style-type: none"> Overview Objectives 	--	1 minute	--
Instruction for Goal 1	Given several possible definitions, the learner will be able to distinguish between <i>pitch</i> and <i>frequency</i> . (<i>Concept/Application</i>)	1.1	2 minutes	<ul style="list-style-type: none"> Initial Presentation Generative Presentation Learner Practice
Instruction for Goal 2	Given an example with two stacked notes on a Piano MIDI Roll Editor, the learner will be able to identify the displayed interval. (<i>Procedure/Application</i>)	2.1	3 minutes	<ul style="list-style-type: none"> Initial Presentation Generative Presentation Learner Practice
Instruction for Goal 3	Given a list of raw number portions of intervals, the learner will be able to identify them as 'Perfect' or not. (<i>Fact/Recall</i>)	3.1	2 minutes	<ul style="list-style-type: none"> Initial Presentation Generative Presentation Learner Practice
	Given an interval number and quality, the learner will be able to identify its expanded names. (<i>Fact/Recall</i>)	3.2	2 minutes	<ul style="list-style-type: none"> Initial Presentation Generative Presentation Learner Practice
	Given an interval number and quality, the learner will be able to identify its contracted names. (<i>Fact/Recall</i>)	3.3	2 minutes	<ul style="list-style-type: none"> Initial Presentation Generative Presentation Learner Practice
Instruction for Goal 4	Given an example of three stacked notes on a MIDI Piano Roll Editor, the learner will be able to solve whether what they see is a major or minor chord. (<i>Procedure/Application</i>)	4.1	3 minutes	<ul style="list-style-type: none"> Initial Presentation Generative Presentation Learner Practice
Instruction for Goal 5	Given a time signature, the learner will be able to identify what the top number means and what the bottom number means. (<i>Concept/Recall</i>)	5.1	2 minutes	<ul style="list-style-type: none"> Initial Presentation Generative Presentation Learner Practice

	Given a musical example on the MIDI Piano Roll Editor, the learner will be able to distinguish between measures, rhythm, and possible meter (time signature). (Fact/Recall)	5.2	3 minutes	<ul style="list-style-type: none"> • Initial Presentation • Generative Presentation • Learner Practice
Post-test	Online test in Microsoft Forms	--	3 minutes	--

Part VI – Formative Evaluation Plan

Purpose

This evaluation is being conducted to determine if songwriters who go through the instructional unit gain a basic understanding of music theory. Further, the author wants to understand whether or not learners feel more confident about basic musical terms and concepts after completing *Essentials of Music for Songwriters*, and if they would be open to taking additional courses on the subject.

Audience

The intended audience of results of this evaluation plan are the author, anyone tasked with assisting the author to update courses for hitsongdesign.com, and ultimately the songwriters who benefit from the implementation of any changes made to the content as a result of the findings of the Formative Evaluation Plan.

Issues

- To what degree are the learning objectives achieved?
- Do songwriters find the information contained in the instructional unit to be helpful?
- Are songwriters more or less likely to take additional instructional units on this topic?
- Do SMEs regard the material as well designed and accurate?

Resources

- Copy of PowerPoint Prototype
- The learners and SMEs must have a computer
- The learners and SMEs must have a good internet connection
- The learners and SMEs must have Microsoft Word and PowerPoint installed on their computers
- If the learners and SMEs prefer to hand-write responses to evaluation questions, they must be able to print out the evaluation and also scan their responses back into the computer to send via email back to the Instructional Designer.

Evidence

- **SME Notes Form:** 2-3 Subject Matter Experts in either music composition, arranging, theory, or songwriting must go through the unit to assess its effectiveness at addressing each of the objectives and also to provide their overall impressions of the layout, visual design, and content.
- **Observation Notes Form:** The Instructional Designer or someone assisting him must observe 3-5 learners going through the unit, noting any salient responses or reactions to various sections on the attached form (being sure to note the PowerPoint slide where the reaction took place).
- **Interview Protocol:** 3-5 learners will need to have gone through the instructional unit in its entirety in order to gather reliable responses to the Interview Protocol. Either the Instructional Designer or someone tasked with assisting him will need to ask questions of each learner and write or record their responses.
- **Attitude Survey:** 3-5 learners will need to have gone through the instructional unit in its entirety in order to gather reliable responses to the Attitude Survey.
- **Instructional Unit Posttest:** 3-5 learners will need to have taken the unit in its entirety in order to properly assess their knowledge of the material using this source of evidence.

Data-Gathering

-
- The methods used to gather the data needed for this Formative Evaluation are listed below next to each of the evaluation instruments:
 - SME Notes Form: the SME Notes Form will be distributed to each SME, and we will ask that they either record their responses in a Word file to save and send back, or that they print, hand-write their responses, and send back scanned copies of the completed SME Notes Form.
 - Observation Notes Form: Once COVID-19 is no longer an issue, the Instructional Designer will set up appointments to sit with selected songwriters and observe them go through the instructional unit on their own computers or on a laptop provided by the Instructional Designer. This meeting will be set to take place in a private study room at a public or university library. The Instructional Designer will record any salient reactions or interesting moments on the form and follow-up with the songwriter to ask about these specific moments after they have completed the instructional unit.
 - Interview Protocol: The Instructional Designer will set up appointments to interview selected songwriters via Skype, Teams, Zoom, Facetime, or similar virtual conferencing software to ask the listed questions and record responses in the document. If possible (and if it is OK with the songwriters), the Instructional Designer will record audio of the meeting so as to completely capture each response. These responses will then be transcribed in Microsoft Word Online (using the audio transcription feature).
 - Attitude Survey: The Attitude Survey will be distributed via email to each of the 3-5 songwriters selected to help with this Formative Evaluation Plan and will be asked to send back their responses either via Microsoft Word or by printing, hand-writing responses, and then sending scanned copies back via email.
 - Learner Performance: The Learner Performance posttest is linked at the end of the unit and is hosted on Microsoft Forms. The responses can easily be recorded and pulled up in Microsoft Excel.

Analysis

- The analysis methods used for each of the evaluation instruments to be used in this Formative Evaluation are listed below:
 - SME Notes Form: for the qualitative portion of this form (open-ended questions at the beginning and those that appear under each objective), the most common responses cited by each SME will be recorded and coded such that they are easily visualized on a pie chart. The responses to the quantitative portion of the SME Notes Form will also be pulled into Excel and displayed on a pie chart as well. The analysis of this data and decisions made based on the data will depend on the number of SME respondents and the frequency of similar responses.
 - Observation Notes Form: Given the qualitative nature of this form's responses, each response will be coded such that they are easily visualized on a pie chart. The analysis of this data and decisions made based on the data will depend on the number of completed forms and the frequency of similar responses.
 - Interview Protocol: Given the qualitative nature of this form's responses, each response will be coded such that they are easily visualized on a pie chart. The analysis of this data and decisions made based on the data will depend on the number of completed forms and the frequency of similar responses.
 - Attitude Survey: The responses to the quantitative portion of the Attitude Survey will be pulled into Excel and displayed on a pie chart. Given the qualitative nature of this form's final question, each response will be coded such that they are easily visualized on a pie chart, and the analysis of all data collected from this form and decisions made based on it will depend on the number of completed forms and the frequency of similar responses.
 - Learner Performance: The responses to this assessment are automatically recorded in Microsoft Excel Online. The analysis of this data and decisions made based on the data will depend on the number of completed forms and the frequency of similar responses.

Reporting

The portions of this evaluation that must be completed in-person will not be completed until it is safe to do so (due to the current COVID-19 pandemic). The portions of this evaluation that can be completed virtually will be completed over the course of the spring 2021 semester. The results of this evaluation will be drafted into a report and filed by March 1, 2021.

Evaluation Schedule

Evaluation Type	Evaluation Method	Revision Phase of Instructional Unit	Purpose	Testers	Required Evaluation Instruments/Product
Formative	Subject Matter Expert (SME) Review	Prototype	Content validity	3 SMEs	SME Notes Form
	One-to-one trials	Prototype revision 1	Try-out impressions	2-3 songwriters	<ul style="list-style-type: none">• Observation Notes Form• Interview Protocol• Attitude Survey
	Small group trials	Prototype revision 2	Identify strengths/weaknesses	2-3 songwriters	<ul style="list-style-type: none">• Observation Notes Form• Attitude Survey• Posttest/Learner Performance
	Field Trial	Revised Instructional Unit	Assess actual product	3-5 songwriters	<ul style="list-style-type: none">• Attitude Survey• Learner Performance

Subject Matter Expert Notes Form

Thank you: you were specially selected to complete this evaluation due to your expertise in music and/or songwriting, so your insight is much appreciated! Teaching music to songwriters can be a tricky task, especially since musical knowledge is not always highly valued in the songwriting community. Any help you can provide as to the layout, structure, and content contained in this instructional unit will go a long way in ensuring that it effectively serves and supports songwriters in their craft.

Directions: the first part of this form contains a few open-ended questions, to which you should feel free to write responses of any length. The second part of the form contains Likert-style rating scale questions where the author would like you to record your impressions as to the unit's effectiveness in addressing its primary objectives.

Again, thank you for your participation!

Name: _____

Title: _____

Open-Ended Questions (complete on separate sheet of paper if necessary):

1. What is your overall impression of the unit?
2. Do you think songwriters will gravitate toward this instructional unit? Why or why not?
3. Do you think songwriters would be open to taking additional courses on this topic? Why or why not?

Objectives Questions:

Objective 1: Given several possible definitions, the learner will be able to distinguish between pitch and frequency.

How well did the unit content address this objective?

Very well <input type="checkbox"/>	Adequately <input type="checkbox"/>	Neutral <input type="checkbox"/>	Poorly <input type="checkbox"/>	Very poorly <input type="checkbox"/>
------------------------------------	-------------------------------------	----------------------------------	---------------------------------	--------------------------------------

Could anything have been added to improve the successful execution of this objective? If so, what?

Could anything be deleted?

Objective 2: Given an example with two stacked notes on a Piano MIDI Roll Editor, the learner will be able to identify the displayed interval.

How well did the unit content address this objective?

Very well <input type="checkbox"/>	Adequately <input type="checkbox"/>	Neutral <input type="checkbox"/>	Poorly <input type="checkbox"/>	Very poorly <input type="checkbox"/>
------------------------------------	-------------------------------------	----------------------------------	---------------------------------	--------------------------------------

Could anything have been added to improve the successful execution of this objective? If so, what?

Could anything be deleted?

Objective 3: Given a list of raw number portions of intervals, the learner will be able to identify them as 'Perfect' or not.

How well did the unit content address this objective?

Very well <input type="checkbox"/>	Adequately <input type="checkbox"/>	Neutral <input type="checkbox"/>	Poorly <input type="checkbox"/>	Very poorly <input type="checkbox"/>
------------------------------------	-------------------------------------	----------------------------------	---------------------------------	--------------------------------------

Could anything have been added to improve the successful execution of this objective? If so, what?

Could anything be deleted?

Objective 4: Given an interval number and quality, the learner will be able to identify its expanded names.

How well did the unit content address this objective?

Very well <input type="checkbox"/>	Adequately <input type="checkbox"/>	Neutral <input type="checkbox"/>	Poorly <input type="checkbox"/>	Very poorly <input type="checkbox"/>
------------------------------------	-------------------------------------	----------------------------------	---------------------------------	--------------------------------------

Could anything have been added to improve the successful execution of this objective? If so, what?

Could anything be deleted?

Objective 5: Given an interval number and quality, the learner will be able to identify its contracted names.

How well did the unit content address this objective?

Very well <input type="checkbox"/>	Adequately <input type="checkbox"/>	Neutral <input type="checkbox"/>	Poorly <input type="checkbox"/>	Very poorly <input type="checkbox"/>
------------------------------------	-------------------------------------	----------------------------------	---------------------------------	--------------------------------------

Could anything have been added to improve the successful execution of this objective? If so, what?
Could anything be deleted?

Objective 6: Given an example of three stacked notes on a Piano MIDI Roll Editor, the learner will be able to solve whether what they see is a major or minor chord.

How well did the unit content address this objective?

Very well <input type="checkbox"/>	Adequately <input type="checkbox"/>	Neutral <input type="checkbox"/>	Poorly <input type="checkbox"/>	Very poorly <input type="checkbox"/>
------------------------------------	-------------------------------------	----------------------------------	---------------------------------	--------------------------------------

Could anything have been added to improve the successful execution of this objective? If so, what?
Could anything be deleted?

Objective 7: Given a time signature, the learner will be able to identify what the top number means and what the bottom number means.

How well did the unit content address this objective?

Very well <input type="checkbox"/>	Adequately <input type="checkbox"/>	Neutral <input type="checkbox"/>	Poorly <input type="checkbox"/>	Very poorly <input type="checkbox"/>
------------------------------------	-------------------------------------	----------------------------------	---------------------------------	--------------------------------------

Could anything have been added to improve the successful execution of this objective? If so, what?
Could anything be deleted?

Objective 8: Given a musical example on the MIDI Piano Roll Editor, the learner will be able to distinguish between measures, rhythm, and possible meter (time signature).

How well did the unit content address this objective?

Very well <input type="checkbox"/>	Adequately <input type="checkbox"/>	Neutral <input type="checkbox"/>	Poorly <input type="checkbox"/>	Very poorly <input type="checkbox"/>
------------------------------------	-------------------------------------	----------------------------------	---------------------------------	--------------------------------------

Could anything have been added to improve the successful execution of this objective? If so, what?
Could anything be deleted?

Observation Notes Form

Notes to be recorded by the Instructional Designer or by anyone assisting the Instructional Designer.

Observed by: _____

Date: _____ Time: _____

Subject(s) observed (circle one): *Individual* *Small Group*

General Observations	Slide #
Questions	
Responses	

Interview Protocol

Thank you for taking the time to evaluate this instructional unit! Your insight is much appreciated. Teaching music to songwriters can be a tricky task, especially since musical knowledge is not always highly valued in the songwriting community. Any help you can provide as to the layout, structure, and content contained in this instructional unit will go a long way in ensuring that it effectively serves and supports songwriters in their craft.

Instructions: please answer the following questions as thoroughly as possible, and feel free to open another Word document or to use a separate piece of paper if you need more room.

1. Did you find the layout of the visual design of this instructional unit appealing? Why or why not?

2. Was the pacing of the content easy to follow? Why or why not?

3. How confident do you feel in your knowledge of the topics covered in the instructional unit?

4. Did the instructional unit successfully clarify meanings of any terms or topics of which you previously had limited knowledge?

5. Did the instructional unit leave you confused about anything? If so, what?

6. Would you recommend this instructional unit to other songwriters? Why or why not?

7. How long did it take you to complete the instructional unit?

Attitude Survey

Thank you for taking the time to evaluate this instructional unit! Your insight is much appreciated. Teaching music to songwriters can be a tricky task, especially since musical knowledge is not always highly valued in the songwriting community. Any help you can provide as to the layout, structure, and content contained in this instructional unit will go a long way in ensuring that it effectively serves and supports songwriters in their craft.

Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. The instructional unit was well organized.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. The layout and visual design of the instructional unit was clear and easy to follow.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. You feel more knowledgeable in general about music theory.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. You would be interested to take further courses on this subject.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. The unit clearly addressed the specific objectives laid out at the beginning.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. How could the unit be improved?					

Learner Performance

The learner posttest can be found at this link:

https://forms.office.com/Pages/ResponsePage.aspx?id=cqRI75Cafk2Fs_VQVYQpGQRbFKWKx_RDj4M9ZI5QUytUM0ZJQ1JPOUtFUIROWDhZUE5JNUYyRE9CUC4u

References

Morrison, G. R., Ross, S. J., Morrison J. R., Kalman, H. K. (2013). *Designing Effective Instruction*, 8th Edition. Wiley. Kindle Edition.

Posner, G. J., & Strike, K. A. (1976). A categorization scheme for principles of sequencing content. *Review of Educational Research*, 46, 665—690.