The Numeric Language of Music, Music Education Primer Course

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The Numeric Language of Music is presented as a primer course to be studied prior to the introduction of traditional music education curriculum. The course temporarily removes many of the conventional terms and symbols used in music education providing the student with a very basic understanding of how musical tones are arranged to create music. This is accomplished by reducing redundant information to single definitions. Simple terms common to the understanding of music as a language temporarily replace traditional terms. Further in the program, traditional terminology is introduced to bridge the two curriculums.

As the program progresses, musical terms and symbols used by traditional music education curriculum are applied to the building blocks the student has learned.
The Numeric Language of Music Primer course is designed as a preliminary introductory course to make music teachers job easier.

Introduction for Music Teachers
The many styles and forms of music such as rock, gospel, classical, reggae, blues, jazz, etc., are composed from what is referred to as the twelve tone, equal or even-tempered system of Western music. Multiple sets of twelve musical tones are identified by the number of vibrations per second which create the specific soundwave we hear as a musical tone. The number of vibrations per second (vps) of the soundwave of each of the twelve musical tones in one set is exactly double or exactly half the number of vps of an adjacent set, referred to as being "equal-tempered."
The term music scale refers to the music industry’s standardized numeric scale of vps. The most common use of this scale is by the piano tuner who tunes the strings of the piano to create a specific number of vps when the strings are struck by the hammer head as the musician presses down the piano key. Manufacturers of musical instruments use the numeric scale of vps to calibrate the instrument to produce the same number of vps for each musical tone the instrument is designed to play.

The numeric scale of vps provides the music industry with a structured conformity of sound. By employing a uniform system to define the vibrations per second of recurring groups of twelve musical tones as the body of musical tones utilized to compose Western music, a musical composition can be written to be performed with multiple musical instruments.

When a musical tone in one set of twelve tones is numerically related to a musical tone in another set of twelve tones, such as half, double, quadruple, etc., the sound of the musical tone is so much alike it is considered to be the "same."

In the Numeric Language of Music Primer course, the piano keyboard is used as a visual diagram of the recurring sets of the "same" twelve musical tones of the music scale used to compose Western music.

In conventional music education curriculum, groups of musical tones are selected from the "master" music scale, referred to as the ?chromatic? scale, to create multiple "sub" scales, such as major, minor, minor melodic, etc.

As an introductory primer music course, the Numeric Language of Music temporarily removes much of the extraneous terminology and focuses on the concept of learning the basic vocabulary of the language of music. Musical terms such as "the Primary Tonal Alphabet" and the "Seven Primary Chords"
present single mental concepts for the beginning music students to understand the structural form of music "vocabulary". Further into the program, conventional music terms such as tonic, subdominant and dominant have a foundation of information upon which to apply conventional musical terms.

In the Numeric Language of Music Primer course, the student learns to "speak" the language prior to learning how to read music. Understanding the structural form of music "vocabulary" coupled with learning how to play the vocabulary across the entire keyboard through performance patterns provides an easier foundation for students to learn from. The Numeric Sequence is included as additional music vocabulary establishing basic building blocks of the structural form of music compositions.

The following is a brief synopsis of the Numeric Language of Music Primer course.

THE MUSIC SCALE

The piano keyboard is used as a diagram of the recurring sets of the "same" twelve musical tones in the music scale.

THE PRIMARY MUSIC "ALPHABET"

The Primary Music "Alphabet" includes 7 musical tones selected from the
group of twelve. The white keys of the piano represent the structural form of
the primary music alphabet. The white key to the left of the group of 2 black
keys is referred to as the key of C. In the key of C, C = 1. Each white key is
then sequentially referred to as

1, 2, 3, 4, 5, 6 and 7.

The student is shown that what would have naturally been referred to as the
8th white key is actually the same as the first white key, 1. Rather than
having an alternate reference to the "same" musical tone, the term "Octave"
is used to represent the distance between any two like tones.

**In the Numeric Language of Music Primer course, the alphabetic and
numeric symbols are not placed on the piano keys as a fixed identity of the
key.**

**Basic Music Vocabulary: The Seven Primary Chords**
In the language of music, similar to the English language, musical tones are
selected from the music alphabet and combined together to form basic music
vocabulary. Basic music vocabulary is referred to as a "chord."

The seven primary chords of the language of music are created by selecting
and combining three musical tones from the music alphabet. The three
musical tones are visually comprehended as every other white key. Each
chord is identified by the numeric reference to the first tone of the chord.

THE SEVEN PRIMARY CHORDS
### Performance Patterns

<table>
<thead>
<tr>
<th>Chord</th>
<th>Pattern</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Chord</td>
<td><img src="image1.png" alt="1 Chord Pattern" /></td>
</tr>
<tr>
<td>2 Chord</td>
<td><img src="image2.png" alt="2 Chord Pattern" /></td>
</tr>
<tr>
<td>3 Chord</td>
<td><img src="image3.png" alt="3 Chord Pattern" /></td>
</tr>
<tr>
<td>4 Chord</td>
<td><img src="image4.png" alt="4 Chord Pattern" /></td>
</tr>
<tr>
<td>5 Chord</td>
<td><img src="image5.png" alt="5 Chord Pattern" /></td>
</tr>
<tr>
<td>6 Chord</td>
<td><img src="image6.png" alt="6 Chord Pattern" /></td>
</tr>
<tr>
<td>7 Chord</td>
<td><img src="image7.png" alt="7 Chord Pattern" /></td>
</tr>
</tbody>
</table>
The student learns to play the 3 tones of each chord simultaneously first with the right hand then with the left hand. The chords are identified as the 1 chord, 2 chord, etc. If the student has trouble playing all three piano keys simultaneously, move to the next exercise.

Next, the student learns to arpeggiate the chord first with the left hand followed by the right hand. The chords are played in sequential order.

Structural form: As the student begins to play, the student’s attention is directed to the visual concept noticing when they play the chord with the left hand followed by the chord with the right hand, two white keys are skipped between each chord.

Next, the student learns to play the chord 4 times across the piano keyboard. The student learns to spot the first piano key from which the performance pattern is played by skipping two white keys between each chord.

So far, the student has learned the seven primary tones of the alphabet, the seven primary chords of basic music vocabulary, the terms octave and arpeggio, and experienced fluent performance of music vocabulary across the entire piano keyboard.

**The Numeric Sequence**
The numeric sequence is a sequence through which the structural form of the performance pattern is played. Each number indicates a specific piano key from which the pattern of performance begins. The student starts with simple sequences. As the student begins to recognize the piano key the number is referring to, the sequences become more complex. Students excel very rapidly in this portion of the program, even at a young age. Here are a few examples of numeric sequences.
The Numeric Language of Music Primer course is meant as a preliminary course to precede traditional curriculum. This curriculum's objective is to assist teachers by simplifying the explanation of basic music principles. For instance, as the music student advances to study traditional curriculum, the teacher simply tells the student the primary tonal alphabet is referred to as the major scale.

Let's look at how two traditional music principles, transposition and the circle of the fifths, are simplified for the student in the new course.

In the Numeric Language of Music Primer course I have authored, I begin the description of the music scale to include all twelve musical tones. The black and white diagram of the keyboard provides a visual template of the structural form of music vocabulary in the language of music. Music vocabulary is defined by the number of musical tones and the interval distance between them in the music scale.

After the student has experienced performing basic music vocabulary and performance patterns, and developed confidence in understanding how the numeric symbols designate single points of reference on the piano keyboard, music vocabulary templates are introduced to assist in understanding how music vocabulary is defined. Music vocabulary templates are presented in the key of C, where C = 1.
The primary tonal alphabet template visually defines the structural form of the vocabulary as 7 musical tones with a specific distance between them in the music scale. Used as a reference, the student quickly comprehends the structural form of music vocabulary is a single definition from any location in the music scale.

Moving the music alphabet seven musical tones higher in the music scale, the key of G is now equal to number 1. In order to maintain the structural form of the alphabet vocabulary skipping one musical tone between each numeric reference except 3 and 4, and 7 and 1, the 7th primary tone moves out of its natural position into an altered state, or position in the music scale, becoming a sharp 7.

In the video examples at the online classes, the student first learns to visually identify the seven piano keys of the alphabet in the key of G and the seven primary chords in the key of G. Next, the student moves performance patterns previously studied to this location on the piano keyboard.

Each time the structural form of the music alphabet is moved 7 musical tones higher in the music scale, one additional primary tone (white key) moves into an altered state (sharp).

Moving the music alphabet seven musical tones lower in the music scale, the key of F is now equal to number 1. In order to maintain the structural form of the alphabet skipping one musical tone between each numeric reference except 3 and 4, and 7 and 1, the 4th primary tone moves out of its natural position to an altered state becoming a flat 4.
The student first learns to visually identify the seven piano keys of the alphabet in the key of F and the seven primary chords in the key of F. Next, the student moves performance patterns previously studied to this location on the piano keyboard.

Each time the structural form of the primary alphabet is moved 7 musical tones lower in the music scale, one additional primary tone (white key) moves into an altered state (flat).

The experience of moving a single structural form to specific locations of the music scale provides the student with the preliminary understanding of the order of the sharps and flats presented in written music notation.

The Numeric Language of Music Primer course also aids the teacher in conveying future theoretical principles such as the circle of the fifths.

Traditional curriculum refers to the major scale moving a 5th higher. The conventional concept of 5 includes counting from the root when referring to the order of sharps and the order of the flats. The student can now understand that conventional curriculum"s use of the mathematical concept of a 5th refers to counting only the primary tones (white keys) including the root when moving the structural form of the major scale to define the order of the sharps and flats used in written music notation.
Music Vocabulary Templates
The beauty of the Numeric Language of Music Primer course is the very simplicity of the building blocks upon which musical principles and concepts can be conveyed. The following are examples of supplementary music vocabulary templates used to assist teachers to explain chord nomenclature.

MAJOR CHORD TEMPLATE

In the Numeric Language of Music Primer course, the major chord is defined as three musical tones with a defined interval distance between them. The major chord template functions a visual "blueprint" of the structural form of this music chord.

MINOR CHORD TEMPLATE

The minor chord is defined as three musical tones with a defined interval distance between them. The minor chord template functions a visual "blueprint" of the structural form of this music chord. The fundamental structural form of the major and minor chord presents a single definition for the student to learn. This single definition remains the same from any root musical tone on the piano keyboard. Additional music "vocabulary" templates are added as the vocabulary is introduced to the student in the performance
and composition lessons.

In the Numeric Language of Music Primer course, the piano keyboard is also used to assist the student in understanding how alternate instruments play the same twelve musical tones of the music scale. Other instruments, such as the cello, violin, flute, saxophone, oboe, etc. perform multiple groups of the same twelve musical tones within the range of the instrument’s capacity.

As the student becomes proficient in creating a music composition using the music vocabulary and performance patterns, the student learns to allocate portions of the composition to be played by other instruments. The following is an abbreviated example of the musical templates provided to the student for use in the orchestration component of the composition and performance class in the Numeric Language of Music Primer course.
Additional terms and symbols of the subject of music are included in the Numeric Language of Music Primer Course. This writing is meant to introduce the Primer Course as a foundation of building blocks to assist music educators by simplifying fundamental musical concepts.

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