

Van Tech Music



MUSIC THEORY LEARNING GUIDE

LEVEL IB

Written by

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as part of their Student Teaching Experience, March 2013

Van Tech Music

MUSIC THEORY PROGRAM - LEVEL IB

The Level IB Program is intended for students in Beginning Band, Junior Orchestra, and new members of the Concert Choir. The program focuses on developing skills of reading, notation, meaning, and language of music.

Activities are noted in each section of this program guide and additional resources will be available at www.vtmusic.ca.

Each Friday, the Music Room (511) will be home to a *Theory Club* tutorial. Students are encouraged to seek assistance from their friends and by attending these tutorial sessions.

Examinations for Level IB will take place at each sitting of Theory Program exams - once in January and once in June, annually. **Students must write the exams until they have completed Level IIIB.**

Topics for Level IB

1. Pitch Naming
 - a. Ledger Lines
2. Scale Writing
 - a. Major Scales
 - b. Natural Minor Scales
3. Scale Degree Identification
4. Triads
 - a. Major Triads
 - b. Inversions
5. Intervals
 - a. Major & Perfect Intervals
6. Rhythm
 - a. Dotted Rhythms
 - b. Time Signatures
 - c. Counting System
7. Italian Terms
 - a. tempo
 - b. dynamics
 - c. style
 - d. technique
 - e. form

1. Pitch Naming

Each key on the piano keyboard will sound a different pitch. Similarly, string, brass, woodwind, and pitched percussion instruments can sound numerous pitches across a broad pitch range.

The pitch names in the 'musical alphabet' are:

A B C D E F G

Each of these pitch names can be modified by adding a sharp or flat sign. The sharp sign will raise the pitch by one semitone from its natural pitch. The flat sign will lower the pitch by one semitone from its natural pitch. To cancel either of these symbols, a natural sign is used. All three of these signs are known, collectively, as **accidentals**.



FLAT NATURAL SHARP

It is important to note that when written in text, we say the pitch name followed by the accidental (i.e. B flat or F sharp). When written on the staff, the accidental will always appear before the actual note.

Each pitch has a place on the **staff**. A staff must include a **clef** to indicate the range in which the pitch should sound. Placing a note on the staff tells a performer which pitch should be played. In our school ensembles, four different clefs are used. Below is a list of the instruments which use each clef, along with a graphic of the clef itself.

Treble Clef

Flute (and piccolo)
Oboe
Clarinet
Saxophone
Trumpet
French Horn
Violin

Bass Clef

Bassoon
Trombone
Euphonium
Tuba
Cello

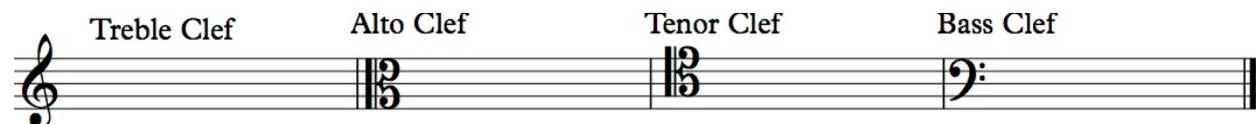
Alto Clef

Viola

Tenor Clef

Bassoon*
Trombone*
Cello*

*These instruments only use the tenor clef when the written pitch remains in a range above the bass clef.



In Level IA we explored enharmonic naming - the concept of a pitch having more than one name. Using the piano keyboard we easily see that between the white keys called G and A, there exists a black key. That black key could be named G# or Ab because of its distance relative to the white keys.

We also learned about the most basic intervals. The smallest distance between two pitches is a semitone. The distance of two semitones is called a whole tone. On a piano keyboard, you can identify a semitone by playing two immediately adjacent keys. Playing a semitone will sound like the famous opening to the theme song from *Jaws*. A whole tone will sound like the first two pitches of *Happy Birthday*. For more on intervals, see section 5a.

A. Ledger Lines

The staff is comprised of 5 lines, as shown on the previous page. When a composer makes use of a pitch that goes **beyond** the range of the staff, **ledger lines** are used.

The image displays two musical staves. The first staff shows an ascending scale from F to G, then a descending scale from G to F, and finally an ascending scale from A to G. The second staff shows a descending scale from E to F, then an ascending scale from F to G, and finally a descending scale from G to A. Ledger lines are used to indicate notes that fall below the bottom line of the staff.

F G A B C D E G A B C D E F A B C D E F G

4

E D C B A G F F E D C B A G G F E D C B A

Activity

1) Visit the website below and follow the links to the online lesson. Once you've completed the lesson, you can test yourself using the exercise trainer. **Be sure to customise the exercises to only include the clef you will use when playing your instrument.**

www.musictheory.net > LESSONS > The Staff, Clefs, and Ledger Lines

www.musictheory.net > EXERCISES > Note Identification

2. Scale Writing

In Level 1A we learned about how a scale is a sequence of pitches, ascending or descending, that follow a pattern of semitones and whole tones.

A. Major Scales

Major scales will contain 8 pitches, exactly one octave in range. If the scale starts on C, it will continue up (or down) until you reach the next C.

Using your knowledge of semitones (ST) and whole tones (WT), you will be able to identify that a pattern of these exists in all Major scales. The pattern is shown below.

The image shows a C Major scale written in both treble and bass clefs. The treble clef staff starts on middle C (C4) and goes up to the next C (C5). The bass clef staff starts on the C below middle C (C3) and goes up to middle C (C4). The interval pattern between notes is labeled as follows: WT (C4-D4), WT (D4-E4), ST (E4-F4), WT (F4-G4), WT (G4-A4), WT (A4-B4), and ST (B4-C5).

B. Natural Minor Scales

Natural minor scales will also contain 8 pitches, exactly one octave in range. However, the pattern of semitones and whole tones is different.

The image shows a C Natural Minor scale written in three clefs: treble, bass, and tenor. The treble clef staff starts on middle C (C4) and goes up to the next C (C5). The bass clef staff starts on the C below middle C (C3) and goes up to middle C (C4). The tenor clef staff starts on middle C (C4) and goes up to the next C (C5). The interval pattern between notes is labeled as follows: WT (C4-D4), ST (D4-E4), WT (E4-F4), WT (F4-G4), ST (G4-A4), WT (A4-B4), and WT (B4-C5).

Notice that the key signatures of 'C Major', shown earlier, and 'a natural minor' shown above are the same. However, the combination of whole tones and semitones tones is different.

Every Major scale has a relative natural minor scale, which starts on the 6th scale degree of the Major scale and continues in sequence for one octave. For example, in the key of C Major the 6th scale degree is A, and 'a minor' is the relative minor key to C Major.

Activity

1) Visit www.vtmusic.ca and download the Scale Writing Activity. To check your work, ask a friend or attend one of the Friday *Theory Club* tutorials.

3. Scale Degree Identification

In level IA we learned that there are two ways of identifying where a certain pitch fits into the scale of a given key. For our purposes, we will only learn the modern system using **scale degree numbers**. In the example below, you'll see a C Major scale with the scale degree number identified below. To ensure that others will understand how you use the numbers, you must always place a **caret** (^) above the number.



To identify the first scale degree, you need to look at the name of the key. For example, in C Major, the first scale degree is C. This information will be useful when learning about triads, Major and minor key relationships, and intervals.

Activity

Visit www.vtmusic.ca and complete the Scale Degree Identification Worksheet 2. To check your work, ask a friend or attend one of the Friday *Theory Club* tutorials.

4. Triads

A. Major Triads

In level 1A we learned how a **triad** is a collection of three pitches played simultaneously (harmonic) or in sequence (melodic). **Major triads** are comprised of the first, third, and fifth scale degrees. We call this “spelling a chord”. Triads can also be called **chords** and are used by composers to add musical interest accompanying a melody.

In level 1A Major triads were written in what is known as **Root Position**, when 1st scale degree is the bottom note of the triad

The image shows three musical staves, each with a treble clef, an alto clef, and a bass clef. Each staff contains a major triad in root position, consisting of three notes: a root note, a major third, and a perfect fifth. The root note is the lowest note in each triad. Labels with leader lines point to each triad, all of which are labeled "Root Position".

B. Inversions

An **Inversion** is when the lowest note in the triad is the 3rd or 5th scale degree. When the 3rd scale degree is on the bottom, we call it a **1st Inversion**. When the 5th scale degree is on the bottom, we call it a **2nd Inversion**.

The image shows three columns of musical notation, each with a treble clef, an alto clef, and a bass clef. Each column contains three major triads. The first column shows triads in root position (root note at the bottom). The second column shows triads in first inversion (third scale degree at the bottom). The third column shows triads in second inversion (fifth scale degree at the bottom). Labels with leader lines point to each triad, identifying them as "Root Position", "First Inversion", or "Second Inversion".

Activity

- 1) Sing the figures notated in the example above. This will help your ear training and make it easier for you to identify what pitch you are playing in a given chord.
- 2) Visit www.vtmusic.ca and complete the Triad Inversion worksheet. To check your work, ask

a friend or attend one of the Friday *Theory Club* tutorials.

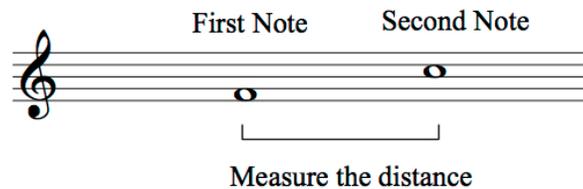
3) Visit the website below and follow the links to the online lesson. Once you've completed the lesson, you can test yourself using the exercise trainer.

<http://www.musictheory.net/lessons/42>

5. Intervals

An **interval** is the distance between two pitches. In Theory Package 1A we looked at whole tones and semitones, these are examples of the smallest distance between two pitches or smaller intervals. In Theory Package 1B, we will learn how to identify all major and perfect intervals. Intervals can be both ascending and descending, we will only work with ascending intervals in 1B.

In determining the size of the interval, we measure the distance from the first pitch to the second pitch.



In naming intervals we use two words. The first word determines the *quality*, and the second word determines the *interval*.

Maj2 Maj3 P4 P5 Maj6 Maj7 P8

Maj2 Maj3 P4 P5 Maj6 Maj7 P8

Maj2 Maj3 P4 P5 Maj6 Maj7 P8

Guide to Naming and Identifying Major/Perfect Intervals

Name of Interval	Common Melody
Perfect Unison	It's the SAME pitch
Major 2nd	"Happy Birthday"
Major 3rd	"Oh when the Saints"
Perfect 4th	"Here Comes the Bride"
Perfect 5th	"Twinkle, Twinkle Little Star"
Major 6th	"My Bonney Lies Over the Ocean"
Major 7th	<i>Will be discussed in class!</i>
Perfect Octave	<i>Will be discussed in class!</i>

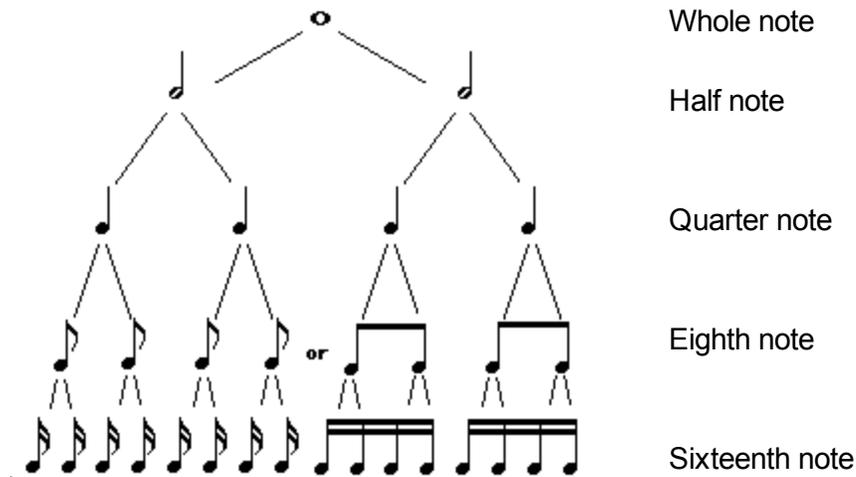
Activity

1) Visit www.vtmusic.ca and complete the Interval Identification worksheet. To check your work, ask a friend or attend one of the Friday *Theory Club* tutorials.

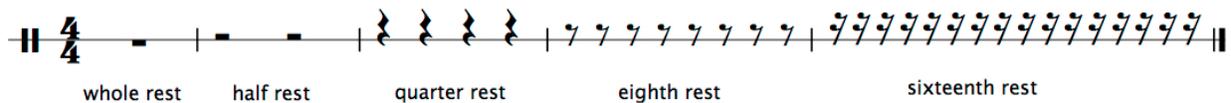
6. Rhythm

Rhythm is the manner in which sounds are organized. The **duration**, or value, of each note or rest must reflect **rhythmic accuracy** by individuals so that different musicians performing different parts maintain strong **rhythmic integrity**.

In level 1A we learned that notes have relationships to each other in the same way as fractions. For example, eight 'eighths' OR four 'quarters' OR two 'halves' will make one 'whole'. We use the same words to describe note and rest values.



Similarly, rests have the same relationship as illustrated above. Observe in the example below the rests shown in sequence from whole rest to sixteenth rest.



A. Dotted Note Values

A dotted note is a note held for a longer duration than usual. The dot represents **adding** half the rhythmic value of the note. For example a dotted half note can be considered as a duration of ONE half note PLUS ONE quarter note totalling an equivalent of THREE quarter notes. This same formula applies to rests as well.

$$\text{♩} \cdot = \text{♩} + \text{♩}$$

$$\text{♪} \cdot = \text{♪} + \text{♪}$$

$$\text{♫} \cdot = \text{♫} + \text{♫}$$

We tend to have common rhythmic pairings of dotted rhythms, an example of this is a dotted quarter and an eighth note pairing. These rhythmic pairings are common in most musical literature such as marches, waltzes, symphonies. Students should become familiar with these patterns as a form of “rhythmic vocabulary”. Here is an example of a dotted quarter and an eighth note passage.

The image shows a musical staff in bass clef with a 4/4 time signature. The melody consists of four measures. The first two measures are in the key of C major (Cmaj7) and the last two are in the key of Bb major (Bbmaj7). Each measure contains a dotted quarter note followed by an eighth note. The notes are: C4 (quarter), E4 (quarter), G4 (quarter), A4 (quarter), Bb4 (quarter), C5 (quarter), D5 (quarter), E5 (quarter), F5 (quarter), G5 (quarter), Ab5 (quarter), Bb5 (quarter).

B. Time Signatures

The **time signature** identified in the example above is an important aspect of organizing music. The two numbers provide different information for us. The top number (*numerator*) tells us how many beats are in a single bar or measure. The bottom number (*denominator*) tells us what note value gets one beat.

To easily read a time signature, simply say it like a fraction. For example, a measure with a time signature of 3/8 consists of *three eighths*.

In 1A we looked at 4/4 time. Now let's look at 3/4 and 2/4 time signatures.

The image shows two musical staves. The first staff is in 3/4 time and contains three measures: a dotted half rest, a quarter rest, and an eighth rest. The second staff is in 2/4 time and contains four measures: a half rest, a quarter rest, and two eighth rests.

N.B. Whole rests are used to indicate an entire bar of rest no matter what the time signature may be. In 3/4, 4/4, 2/4, or any other time signature the whole rest is a **whole bar of rest**.

C. Counting System

Different musicians rely on different systems of counting their music. As a developing musician, you may have organized a way to count that brings you success. For the purpose of being able to communicate consistently amongst student-musicians at Van Tech, the following are examples of the counting system we will use to represent:

- duration of notes that sound
- duration of rests
- subdivision of each beat

Subdivision is when a beat is divided into smaller pieces. For example, when counting a beat as a quarter note, a pair of eighth notes divide a beat into halves. Similarly, sixteenth notes divide a beat into quarters. **Triplets** are notes that are used when a beat is divided into thirds.

The image shows a musical staff with a triplet of three eighth notes. A bracket above the notes is labeled with the number '3'. Below the first note is the number '1', and below the other two notes is the word 'trip - let'.

It is absolutely true that the first beat in any measure of music will be represented by '1'. Look at the following examples as you come to understand the rules listed below.

The image shows two musical staves in 4/4 time. The first staff shows four measures with counting systems: 1+2+3+4+, 1+2+, 3+4+, and 1+ 2+ 3+ 4+. The second staff shows four measures with counting systems: 1+ (2+ 3+) 4+ +, 1+2+ (3+4+ 1+), 2+ (3+) 4+ +, and (1+) 2+ 3+ (4+).

1 e + a (2+) (3+) 4 + 1 + (2+) 3 e + a (4+) (1+) (2+) 3 + 4 +

1 + 2 + 3 +4+ 1 + 2 trip-let 3 + 4 trip-let 1 e + a 2 + 3 + 4 +

Rule 1 - Duration of Notes that Sound

- Use a regular (or larger) sized number or '+' symbol to identify beat or part of a beat on which the note begins to sound.
- Use smaller numbers or '+' symbols to identify that the note continues to sound until the end of its value.

Rule 2 - Duration of Rests

- Use parentheses to surround numbers or '+' symbols to identify the full duration of a rest.

Rule 3 - Subdivision of Each Beat

- In every measure, each eighth must be indicated by a number of '+' symbol to ensure that no part of a measure was left out.
- If a passage of music uses sixteenth notes or sixteenth rests, you must use the '1 e + a' pattern of counting.

Activity

Visit www.vtmusic.ca and complete the Rhythmic Analysis worksheet. To check your work, ask a friend or attend one of the Friday *Theory Club* tutorials.

7. Italian Terms

Communicating in a common language is an important aspect of musicianship. Composers and performers use an efficient system of expressive terms when describing music or providing instructions for how the music should be interpreted. Most often, these terms are provided in Italian. Some composers like Mahler, Grainger, or Debussy are known to use German, English, and French terms. The list below will be tested on the Level IB Examination.

A. Tempo

Italian Term

a tempo
tempo
Grave
Lento
Largo
Adagio
Andante
Moderato
Allegro
Vivace
Presto
L'istesso tempo
Accelerando
Ritardando
Rallentando
Mosso

English meaning

return to the original tempo
speed (beats per minute)
slow and solemn
slowly
broadly
slow and stately
at a walking pace
moderately
lively and quick
fast
very fast
the same tempo
gradually faster
gradually slower
suddenly slower
motion

B. Dynamics

Italian Term

pianissimo
piano
mezzo piano
mezzo forte
forte
fortissimo
crescendo
decrescendo
diminuendo
sforzando

English meaning

very soft
soft
medium soft
medium strong
strong
very strong
gradually stronger
gradually softer
diminishingly
with sudden emphasis

C. Style

Italian Term

agitato
animato
con brio
calme
dolce
espressivo
maestoso
pastorale
pesante

English meaning

agitated
animated
with life
calm
sweetly
expressively
majestically
pastoral
weighted

D. Technique

Italian Term

pizzicato

arco

legato

marcato

staccato

tenuto

English meaning

strings are plucked

strings are bowed

smoothly; connected

well marked

separated

held

D. General Use

Italian Term

tutti

solo

solì

sempre

con

senza

molto

troppo

non

meno

piu

poco a poco

simile

subito

English meaning

all; together

for one performer

for all

always

with

without

much, very

too much

not

less

more

little by little

in the same manner

suddenly

E. Form

Italian Term

attacca

dal segno

da capo

coda

fine

English meaning

begin the next section at once

from the sign

the beginning

ending

the end