



# Left Hand Technique: Intonation, Shifting, and Vibrato

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## **What will you take away from this session?**

Today, we will look closely at the tools and strategies that can be used during fundamentals time to help students learn the cognitive, aural and technical skills that address the challenges that cause our students to struggle with intonation. These challenges include:

1. Student instruments are out of tune (even after they've tuned their instruments)
2. Students lack fine tuning skills and experience
3. Technical Challenges
  - a. Poor hand position and instrument position increase the difficulty of an instrument that is already challenging to play in tune
  - b. Students lack the muscle development and dexterity to accurately perform the various finger patterns their instrument requires.
    - i. Student fingers are not familiar or comfortable with the finger patterns;
    - ii. Students are not aurally aware or (or paying attention to) to the changing 4<sup>th</sup> and 7<sup>th</sup> scale degrees in each key.
  - c. Range—Students lack shifting skills and upper position technique
4. Students lack a thorough understanding of the theory components related to pitch and intonation.

**Think for a moment: Why do your students play out of tune?**

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## **1. Tuning Our Instruments**

**Tuning strings (and notes) begins with TONE.** Teach “Tuning Tone”: Using a soft, transparent tone allows students to hear the correct pitch while they tune their strings.

### **Cross Tuning For Classes Comfortable Tuning Themselves**

1. The leader plays the A; the students listen for 5 seconds, and then tune their A string at the tip of the bow. Once the A is in tune, the leader turns off the A and instructs the class to “tune up” the rest of their strings. The class tunes their instruments quietly using the tip of the bow and stops playing when they are finished.
2. Even accomplished high school orchestras are still a little out of tune at this point, and the student leader should then take the class through the Cross-Tuning procedure.
  - A. Everyone plays their A string again to make sure it is perfect.
  - B. Violin/bass play their A strings while violas and cellos tune their D strings.
  - C. Players “switch.” Violas/cellos play their A while violins/basses tune their D.
  - D. Violins/basses continue to play their D; violas and cellos cross over and tune their G string.
  - E. Players “switch;” viola/cellos play their D while violin/basses tune their G string.
  - F. Violins and basses continue to play their G string; violas and cellos cross over and fine tune their C string.
  - G. Finally, violas and cellos play their A string, while the violins tune their E string. Then, violas and cellos drop out, and basses tune their E string to the violins. Basses may take few extra seconds to double check their tuning using harmonics.

## **2. Teach students to blend their tone and intonation--to finely tune their chords**

**Tuning Canons, Chords** and **Chorales** teach students to listen, blend, and finely tune the notes and chords in each key. The tuning canon is a good way to begin class; as a warm up, students can focus on performing with good pitch and good tone

1. 2. 3. 4.

Vln.

Vla.

Vc.

Bass

x1

1

1/2

## **Use Scales and Arpeggios that allow for differentiated instruction**

The purpose of studying scales and arpeggios is to improve intonation and tone by learning patterns and technique required in different keys across the entire range of the instrument.

## **Introduce New Scales and Arpeggios to students of different levels**

Students of different levels can learn and perform scales at the same time. Those performing more octaves should begin their scale first, as shown below.

3-Octave

2-Octave

1-Octave

**Use Differentiated Instruction** to teach students of different levels at the same time:

More advanced students can begin their scale first, allowing them to play more octaves.

Three-octave students can perform the three-octave scale, while the other students stay on the number of octaves appropriate for their level.

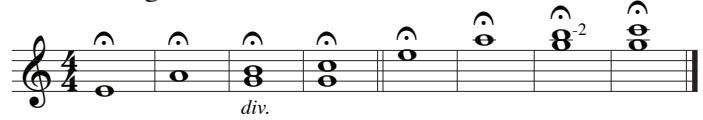
# Major Scales, Arpeggios, and Thirds

## C Major

### 65. Tuning Canon



### 66. Tuning Chords



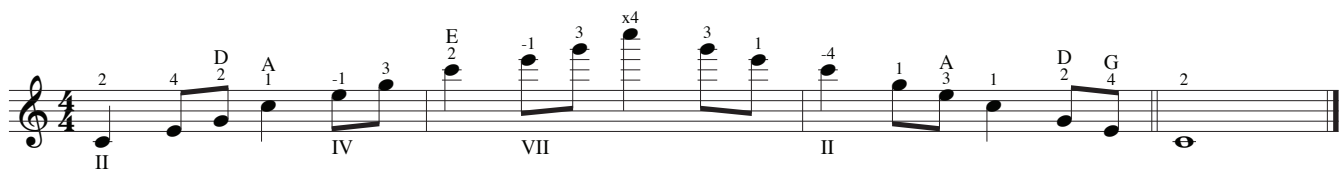
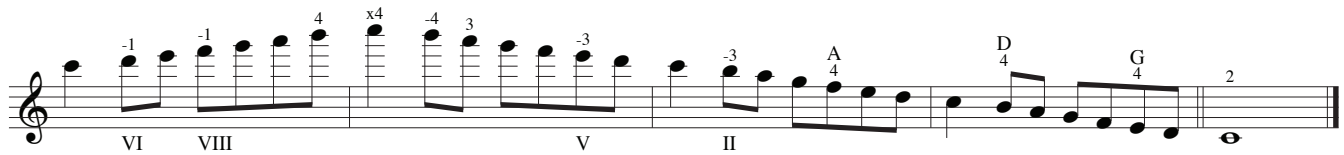
### 67. Scales and Arpeggios - One Octave



### Two Octaves



### Three Octaves



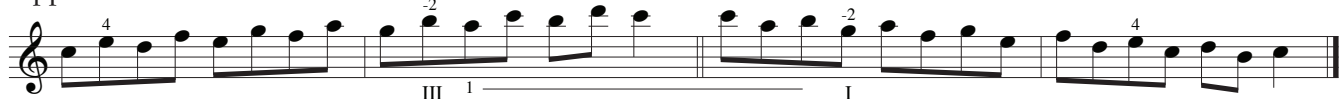
### 68. Dominant Arpeggio



### 69. Thirds - Lower Octave

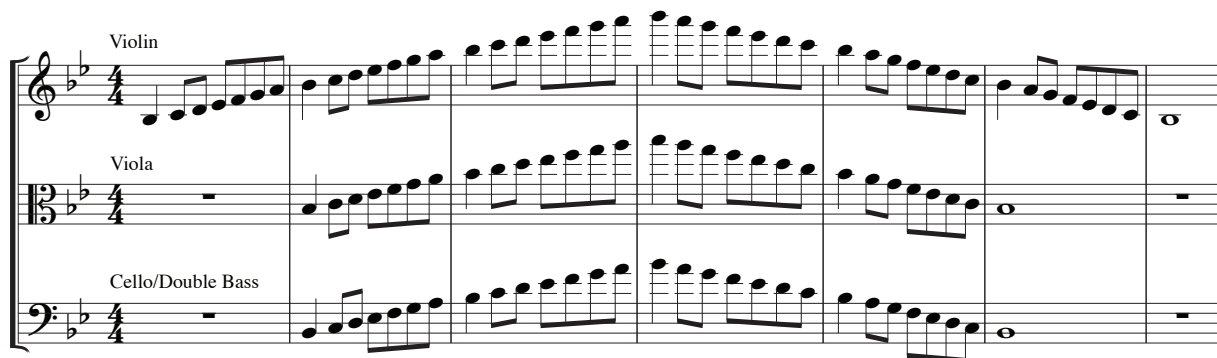


### Upper Octave



### Differentiate Instruction to Accommodate Instrument Differences

The difficulty of a scale can vary depending on the instrument. In a high school class, for example, violin students will likely be ready to learn a three-octave B-flat scale long before their lower string peers. We recommend differentiating instruction (below) to make scale levels appropriate for everyone.



### Scale Objectives—In ALL LEVELS Students will:

- Perform with correct and relaxed instrument, left and right hand position
- Perform the correct fingerings and finger patterns across different strings and positions
- Shift fluidly and accurately from the elbow
- Perform with an even tone that projects well in all positions
- Finely tune all notes

### Assessment: Rubric for All Levels

Category	Few correct 3-4	Some correct 5-6	Most correct 7-8	All correct 9-10	Score
<b>Instrument And Hand Position</b>	<input type="checkbox"/> <b>Body and Instrument position</b> are correct, relaxed and well-aligned <input type="checkbox"/> <b>Left hand</b> , elbow, wrist, thumb and finger shape and placement are correct <input type="checkbox"/> <b>Right hand</b> , thumb, pinky, fingers, knuckles and wrist are fluid and placed correctly				
<b>Rhythm, Tempo and Fluency</b>	<input type="checkbox"/> <b>Tempos</b> are correct and consistent; no rushing <input type="checkbox"/> <b>Rhythms are correct</b> ; notes and rests are counted and subdivided correctly. <input type="checkbox"/> <b>Fluency</b> : No stopping, stumbling, or dragging				
<b>Intonation</b>	<input type="checkbox"/> <b>Notes</b> are consistently correct and in tune in all positions <input type="checkbox"/> <b>Fingerings</b> are correct. <input type="checkbox"/> <b>Shifting (if any)</b> : Relaxed, fluid, and accurate <input type="checkbox"/> <b>Finger Patterns, half and whole step distances</b> are correct. <input type="checkbox"/> <b>Fingertips adjust quickly</b> , refining the pitch after finger placement.				
<b>Tone and Articulation</b>	<input type="checkbox"/> <b>Bow Speed and Weight</b> are balanced and produce an excellent tone that projects well. <input type="checkbox"/> <b>Contact Point</b> is the correct distance between the bridge and fingerboard <input type="checkbox"/> The <b>Bow Angle</b> is perpendicular to the string and rotated correctly <input type="checkbox"/> <b>Slurs and articulations</b> are correct				

### **3. Technical Challenges can be broken down into several categories**

- a. Poor hand position and instrument position increase the difficulty of an instrument that is already challenging to play in tune
- b. Students lack the muscle development and dexterity to accurately perform the various finger patterns their instrument requires.
  - i. Student fingers are not familiar or comfortable with the finger patterns;
  - ii. Students are not aurally aware or (or paying attention to) to the changing 4<sup>th</sup> and 7<sup>th</sup> scale degrees in each key.
- c. Range—Students lack shifting skills and upper position technique

### **Strategies for Improving Instrument and Left Hand Position**

Allocate time (fundamentals time) at the beginning of rehearsals for reviewing hand, body and instrument position and technique.

- Have upper instruments stand up; it's easier for them to play, and for you to see and correct problems.
- Get off the podium and move around the room.
- Use calisthenics and maintain zero tolerance for position problems and flaws—Don't be an enabler by allowing poor positions.

### **Strategies for Improving Isolated Finger Patterns—Practice Getting Each Pattern In Tune**

#### **Tetrachord Etude**

Use Tetrachord Etudes to efficiently focus on finger patterns. It can be used as a daily warm-up or in a rehearsal to review the problematic finger pattern and transfer the pattern to the music. Cello students learn to shift between two positions in a way that is common for them; basses will shift through three positions and use bass pivot fingerings.

#### **19. Tetrachord Etude**

Tuning Notes (Dorian Tetrachord)      Etude



After learning the Etude with the Dorian tetrachord above, play it with one of the other tetrachords below.

Tetrachords:



## Develop Student Finger Pattern Strength with Velocity Etudes

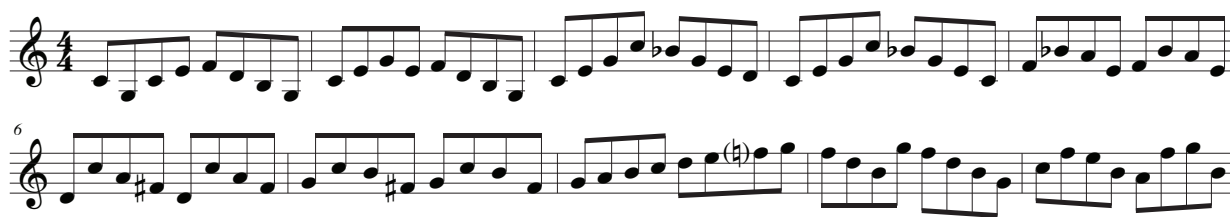
Use velocity exercises develop finger speed and accuracy while maintaining a relaxed left hand. This Velocity Etude also improves bow management and tone production. Once the Major pattern is learned, teach the Minor and Phrygian patterns; then perform the etude with all three patterns in succession as a group without stopping.

### 38. Velocity Etude

First, perform the exercise as written, and then perform with the different finger patterns (#2. C<sup>♯</sup> and #3. B<sup>♭</sup>) shown below.



### 15. Dominant Etude



## Strategies for Improving Shifting, Upper Position Technique Problems

Teach students about the different kinds of shifts: Both Same and Different Finger Shifts

### 26. Shifting to a Different Finger

- ♦ The diamond is the destination of the shifting finger; it is a silent shifting note that should be hidden, not heard.



Use shifting exercises that develop skills throughout the entire range of the instrument. These exercises also help students develop well-balanced instrument positions to shift easily and correctly.



### Higher Positions

Take time to teach students how to play in higher positions. “Just figure it out yourself” and “go ask your private teacher” are *not* teaching strategies.

## Upper Register and Thumb Position

To reach higher positions, bring the elbow and arm around the instrument, and the thumb around the neck.

### 52. Upper Register Patterns



#### 4. Strategies for Improving Tonal Literacy

Students who understand where the notes are on the fingerboard are more likely to play the right notes.....stop and ask yourself honestly:

- Do students ask questions like: “Is that a low 2 or a high 2?”
- Do students understand the difference between F-natural and F-flat? Or F# vs. Gb?
- Do they know how a key signature works well enough to explain the finger patterns on each string?

The following examples come from the Violin book for *Music Theory for the Successful String Musician*.

##### Exercise 5.5. Enharmonic Spelling

- Each space between the natural notes below has a sharp and flat name. Write both names of the notes in one circle as shown below. Between C and D, for example, you would write C# / Db .



- Write the enharmonic spelling for each note below.

A# = \_\_\_\_\_ C# = \_\_\_\_\_ D# = \_\_\_\_\_ F# = \_\_\_\_\_ G# = \_\_\_\_\_

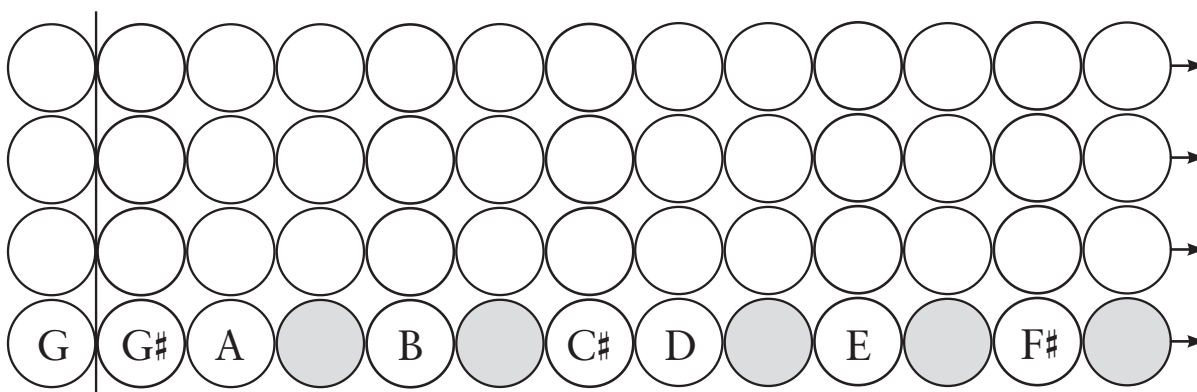
Ab = \_\_\_\_\_ Bb = \_\_\_\_\_ Db = \_\_\_\_\_ Eb = \_\_\_\_\_ Gb = \_\_\_\_\_

- Write the note that is a *major second lower* than the given note, as shown in the first measure.



- On the fingerboard map below, write the names of your open strings in the circles to the left of the line, starting with the highest string in the top circle. Then:

- Look at the key signature to the right and fill in all of the sharp *and* natural notes in that key. Each string will look like a scale with half steps and whole steps.
- Shade in the remaining spaces on the fingerboard that represent other notes not in that key signature. The lowest string has been done for you.



## Rehearsal Strategies for Finely Tuning Concert Music

1. **Select concert music that does not require unfamiliar patterns or positions.** Use technical exercises to introduce and practice backward or forward extensions, shifting and higher positions. Then—after students can comfortably play these patterns in tune—show students how to apply these familiar skills in their concert music.
2. **Playing in tune begins and ends with TONE.** Expect students to listen and blend their tone (agreeing on timbres) and intonation—these two elements are inextricably linked.
  - a. Long notes are a good place to introduce blended intonation
  - b. Short notes should blend too; encourage students not to “whack” short notes
3. **Help students pay attention to the leading tones—4<sup>th</sup> and 7<sup>th</sup> scale degrees.** Poor intonation is less about talent, and more that students just aren’t paying attention, or focusing on correcting out of tune notes.
4. **Teach students to listen and tune to other sections.** Slow down the concert music until you and the students can hear EACH CHORD, and work on playing each chord in tune—**just like they do with their tuning canon, chords and chorales.** If a note is out of tune, stop and correct it. Expect students to listen and adjust their fingertips.

**END GOAL:** When each section sounds like one instrument, and the sections are listening and tuning all chords correctly to each other, the resulting resonance is magical. Achieving this resonating intonation is our goal—*THAT* is what we mean when we say, “It’s in tune.”

Students will play as poorly as teachers allow them to play,  
and they will only play their best when teachers give them *no other choice*.

## **String Resources Available Through GIA Publications**

*Habits of a Successful Orchestra Director*  
*Habits of a Successful MIDDLE LEVEL String Musician*  
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**COMING SOON!**

***Habits of a Successful String Musician, 2<sup>nd</sup> Edition (2023)***

***Habits of a Successful Young String Musician, Books 1 & 2 (2024)***

*By Sarah Ball, Margaret Selby, Christopher Selby, and Scott Rush*



**Dr. Christopher Selby** is the author of *Habits of a Successful Orchestra Director*, *Music Theory for the Successful String Musician*, and co-author of the *Habits of a Successful String Musician* series, a collection of string method books for middle and upper-level orchestras published by GIA. He is an active clinician and conductor, and has presented sessions at numerous Midwest Clinics, American String Teacher Association (ASTA) National Conferences, and state conferences across America. Dr. Selby is the 2022 Teacher of the Year at the School of the Arts in Charleston, SC where currently teaches high school orchestra. His orchestras performed at the 2019 Midwest Clinic, and they won the 2016 ASTA National Orchestra Festival's top award of Grand Champion in the competitive public school division.

Dr. Selby earned a music education degree from the Hartt School of Music in Connecticut, and a Masters and Doctorate in Orchestral Conducting from the University of South Carolina. His teaching career began in Fairfax County, VA in 1992. From 2001 to 2012, Dr. Selby was the Orchestra Coordinator in Richland School District Two where he taught high school and supervised the district's orchestra curriculum and instruction. He then moved to Charleston, SC and returned to teaching full time in the classroom in his current position at the Charleston County School of the Arts.

Dr. Selby regularly guest conducts Regional and All-State Orchestras across the southeast. He has held national leadership positions in ASTA and NAFME. Dr. Selby was the President of the South Carolina Music Educators Association (SCMEA) from 2011-2013 and he served two separate terms as the President of the state's Orchestra Division. He is a contributing author for *Teaching Music Through Performance in Orchestra*, vol. 4 and has written articles for NAFME and in ASTA's *American String Teacher*.