Tuning as an Ensemble in All Levels of Orchestra

Christopher R. Selby

In School Orchestra, *all students*—not just the ones taking lessons—deserve sequential, comprehensive technical instruction that enables them to learn the musical and performance skills that upper-level orchestral works require, so that every student *can make great music*.

What is the best way to teach string skills to students in orchestra?
If directors want to teach great orchestral repertoire to their students—and have their students play this music well—they must devote part of their rehearsal to teaching students the fundamental and advancing skills these pieces require. **Fundamentals Time** is the classroom rehearsal time that you devote to improving student skills and technique at the beginning of rehearsals, but also during time embedded within the rehearsal to teach and reinforce good technique that improves student performance.

In this session, you will take away tools and strategies that can help students learn the cognitive, aural and technical skills to play in tune the way professionals do. We will go through a string orchestra lesson plan similar to the one I use with my string classes.

Fundamentals Time (50% of Instructional Time)

- Tuning Canon, Chords, Scales, Arpeggios and Thirds
- Left Hand and Right Hand Exercises

Concert Music Rehearsal (50% of Instructional Time)

- Apply the skills learned above in orchestra rehearsal
- Use additional rehearsal strategies to improve intonation during orchestra rehearsal

DAILY LESSON PLAN

1. Stretch/Breathe/Describe what we are doing today
    a. Intonation is largely about attention and focus.
    b. Take 1-2 minutes to focus the class to get more productivity from the remaining minutes in the class.
2. Tune and Cross-Tune
    a. Cross-tuning teaches students to tune to other students in unisons and fifths.
    b. It also teaches them to focus again on getting their strings even more in tune.

Fundamentals Time (50% of Instructional time)

3. Tuning Canon and Chords
    a. Teach students to blend their tone and intonation
    b. Teach students to tune their notes to other notes in the chord
4. Scales, Arpeggios (*especially Dominant Arpeggios)* and Thirds
    a. Review Keys allow students to apply tuning/blending skills at a higher level to learn how playing in tune really sounds.
    b. "Frontier Keys" focus instruction on the finger patterns where students struggle most with intonation
5. Left Hand Skills (Focus only on your class's Frontier Technique)
    a. First position patterns—especially extensions
    b. Shifting Skills and Finger Patterns in middle positions
    c. Address challenges in keys with more than 3 sharps/flats
    d. 2-Octave Arpeggio sequences develop pattern fluency across the instrument
    e. Chromatic scales, diminished arpeggios, and Upper positions
6. Articulation Skills (I teach this here, but not for improving intonation)

*Intermittent Content/Units: I rotate these lessons in different weeks to reach more skills over the course of the year and to create variety in my lessons from week to week.

- Chorales help students apply tuning/blending skills to short musical selections at a higher level to learn how playing in tune really sounds.
- Music Theory improves intonation by teaching students to understand how the key signature affects the major/minor seconds and thirds in finger patterns
- Sight Reading Exercises develop literacy skills. I teach these throughout the year, but not for improving intonation.

Concert Music (50% of my instructional time)

a. Select concert music that your students can play in tune (seriously)
b. Perform harmony with a blended tuning tone; orchestra is mostly harmony
c. Practice slowing down problem spots for students to tune every note
d. Play short notes long enough to have a good tone that they can tune

Part 1. Beginning Rehearsal

Playing in tune requires focused attention. How does the beginning of my class help or detract from this focus? Begin every rehearsal by focusing student attention on the ensemble's plan for that day. Stretching, breathing, and a quick focus statement really helps (and kids love it.)

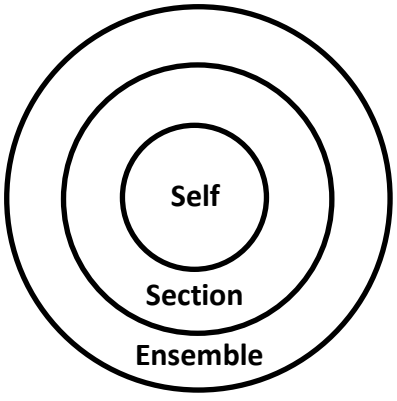
Part 2. Tuning Student Orchestras is a Two-Step Process—ALWAYS

STEP 1: 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. 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 instructs the class to tune their remaining strings using a quiet tuning tone at the tip of the bow.

STEP 2: Cross Tune

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.

1. Everyone plays their A string again to make sure it is perfect.
2. Violin play their A strings while violas, cellos and basses tune their D strings.
3. Then, violas & cellos play their A while violins & basses play/tune their D.
4. Violins continue to play their D, while violas, cellos and basses tune their G string.
5. Then, viola/cellos play their D while violin & basses play/tune their G string.
6. Violins and basses continue to play their G string; violas and cellos tune their C string.
7. 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.



The Three Circles of Ensemble Awareness

Self: Where children naturally focus their attention

Section: Where teachers tell students to focus their attention

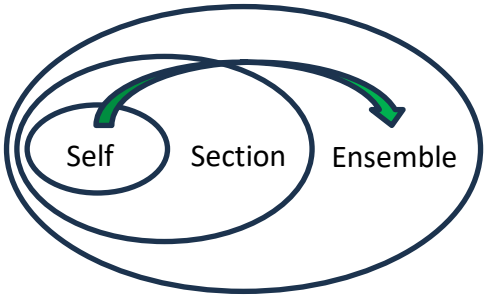
Ensemble: Where musicians focus their attention when they want to play in tune and stay together as an ensemble,

Key Point! Remember This:

For our students to tune together as an ensemble,
And listen and play together as an ensemble,
Teachers must teach students to listen <u>beyond</u> their own section
To learn how their part fits together with other sections in the ensemble.

Part 3. Teach Students to Listen and Tune Chords Across the Ensemble

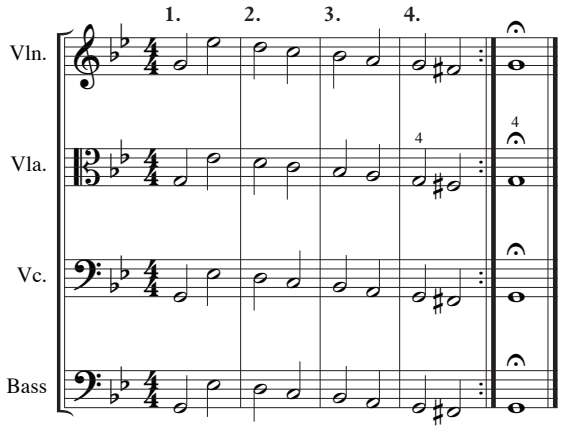
When professional string players play "in tune," they are tuning their notes to *each other.* There is no playing "in tune" in an ensemble without listening to and blending with the other players in your section, and tuning our notes with the chord tones played by other sections of the orchestra.



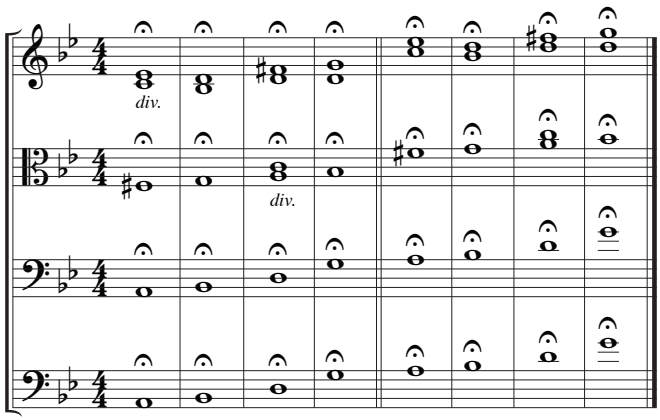
How are we going to teach this?

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

135. Tuning Canon



136. Tuning Chords



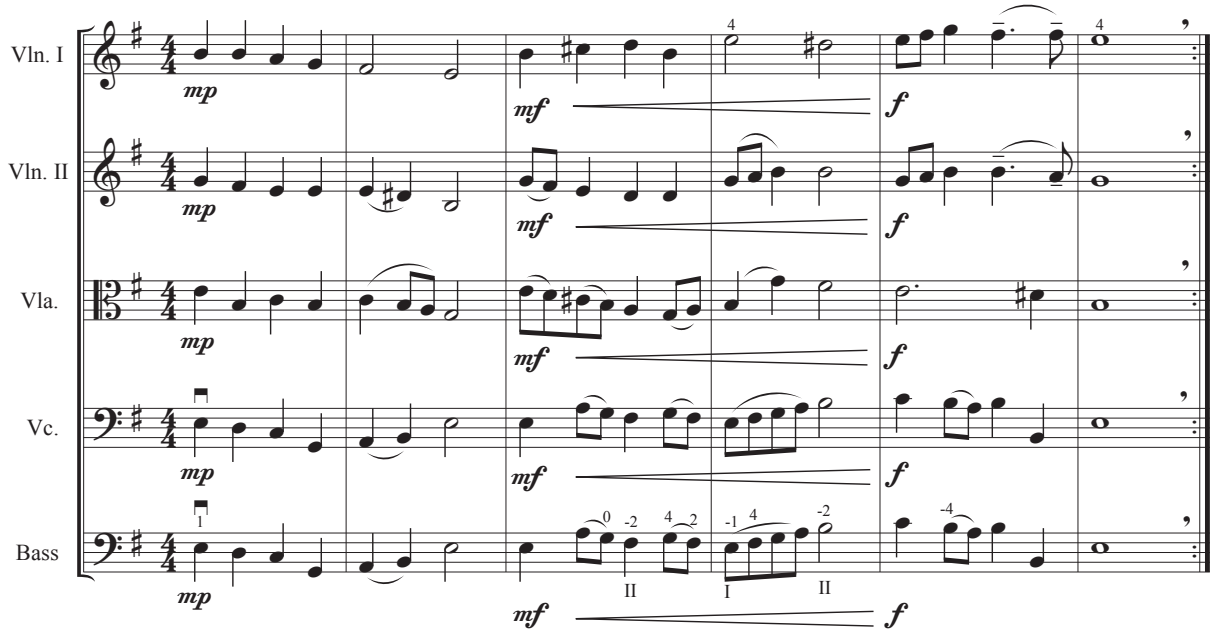
KEY POINT! REMEMBER THIS:

There are TWO parties learning lessons about intonation:

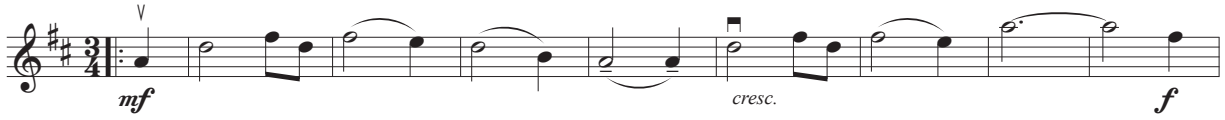
1. Students learn to listen, blend, and finely tune notes and chords
2. The teacher is also reminded how well students can play in tune; and
    1. How to give students the time and conditions to finely tune their notes/chords
    2. How to EXPECT students to tune their notes/chords

Chorales. Chorales help students apply tuning/blending skills to short musical selections at a higher level to learn how playing in tune really sounds. They can be taught anywhere in the day's curriculum, and any time during the year. They are an excellent bridge between exercises and concert music. Some teachers use chorales every day; I rotate them in and out of the curriculum throughout the year, and I use them differently with different levels of orchestra.

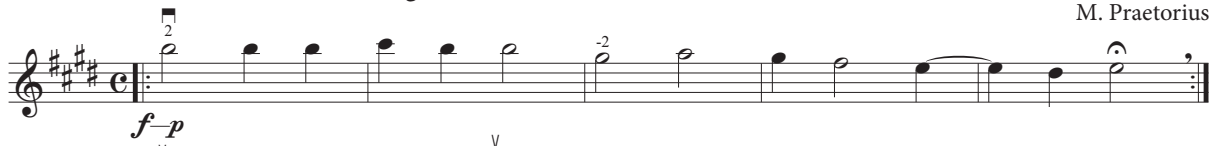
223. Jesu Meine Freude (♩ = 68) **J. S. Bach**



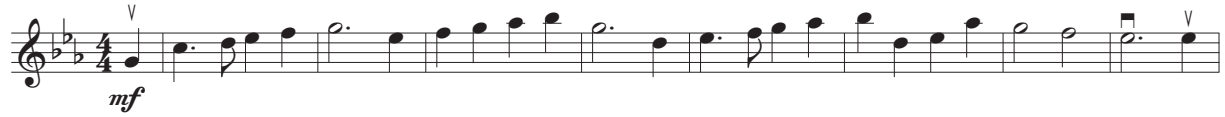
224a. Amazing Grace (♩=80) - Violin 1 African-American Spiritual



228a. Lo, How a Rose 'Ere Blooming (♩=88) - Violin 1 M. Praetorius



234a. Yigdal (♩=92) - Violin 1 Jewish Hymn



Part 4. Scales, Arpeggios and Thirds—Focus on Frontier Keys

What are "frontier keys?" When selecting keys to teach, consider dividing the keys you want your students to learn into three groups: familiar keys, frontier keys, and "not yet" keys.

- **Familiar keys** are those that your students know and play well already in first, second, or third position; even if students are not comfortable playing the third octave of a G major scale or arpeggio, the key of G Major is probably a familiar key for your students.
- **Frontier keys** contain lower position patterns that are less familiar your students. Since challenging keys are much easier on violin and viola, determine your frontier keys by watching where your cello players tend to struggle in the lower positions.
- **"Not Yet" keys** include the keys that have more sharps or flats than your frontier keys. Give yourself permission to take these keys off of your to-do list or long-range plan for that year. Focus instead on the frontier keys until they can be moved to the familiar category.

When and how to incorporate "frontier" keys and review familiar keys in your lesson plans. First, identify the frontier keys for your orchestra, and write those down in your curriculum or long-range plans. For many programs these are the keys with three to four sharps or flats, but your orchestra's frontier may have greater or fewer sharps/flats.

3 Sharps:	A Major/F# Minor	3 Flats:	E-Flat Major/C Minor
4 Sharps:	E Major/C# Minor	4 Flats:	A-Flat Major/F Minor

Focusing on the frontier keys in each level of orchestra you teach is the most efficient way for your students to progress through their key study, and learn the next sequence of patterns that is most likely to challenge them. Spend quality time—three or more weeks—on each key. These keys should be one of the left-hand cornerstones of your orchestra curriculum.

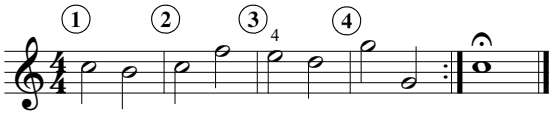
The scales and arpeggios of familiar keys are best reviewed as a warm-up to a specific concert piece in the same key. On days when you plan to review a familiar key with canons, chords, scales, arpeggios, and thirds, take a break from the scale study of your frontier key.

TEACHER TIP: Even though your review of familiar keys will often appear in your daily/weekly plans, your long-range plans will be clearer and more focused if you do not include them in the curriculum for that class. Only write your frontier keys into your long-range curriculum.

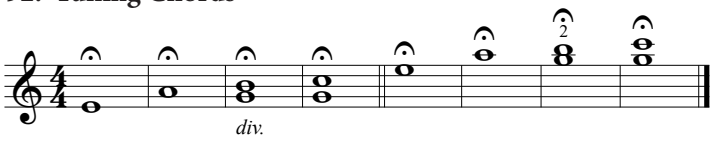
Major Scales, Arpeggios, and Thirds

C Major

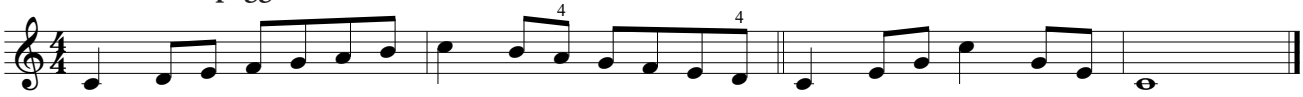
91. Tuning Canon



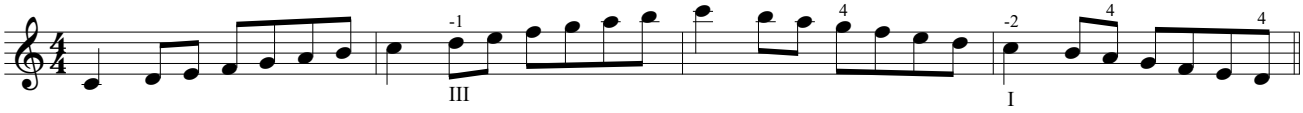
92. Tuning Chords

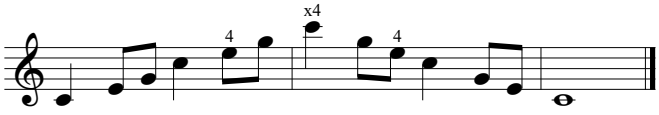


93. Scales and Arpeggios - One Octave

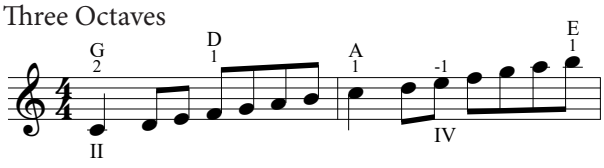


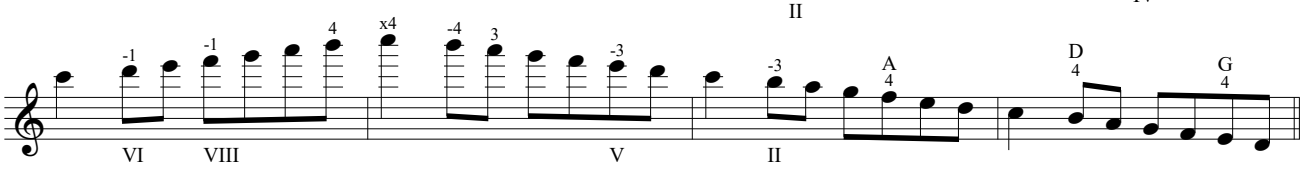
Two Octaves

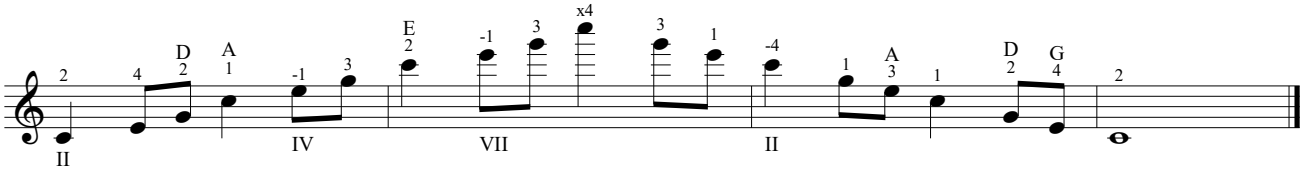




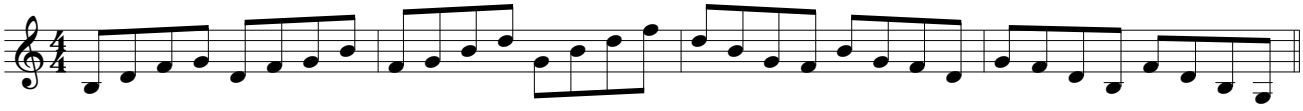
Three Octaves



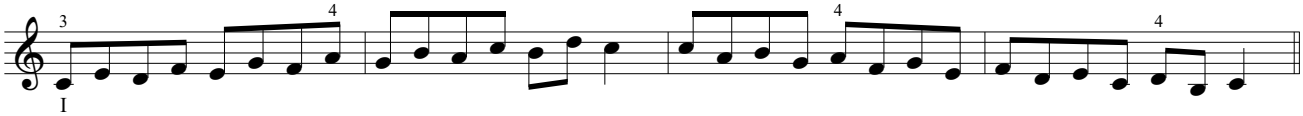




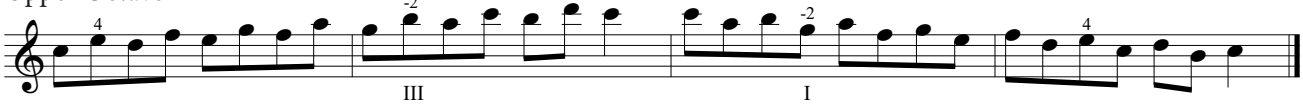
94. Dominant Arpeggio



95. Thirds - Lower Octave



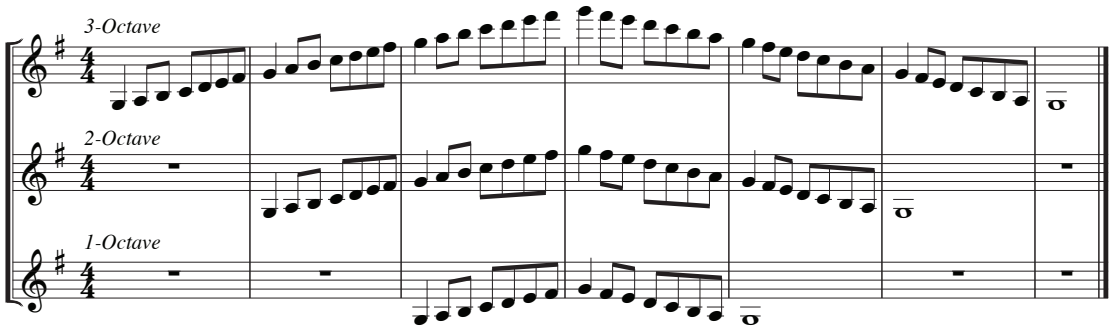
Upper Octave



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.

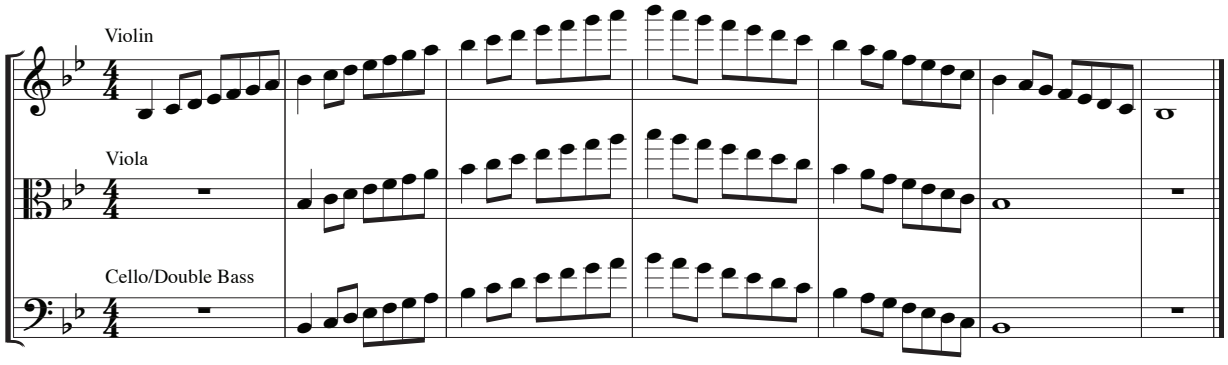
Introducing New Scales and Arpeggios to students of different levels

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.



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.

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.



Part 5. Left Hand Skills

Continue Improving Instrument and Left-Hand Position (even in high school!)

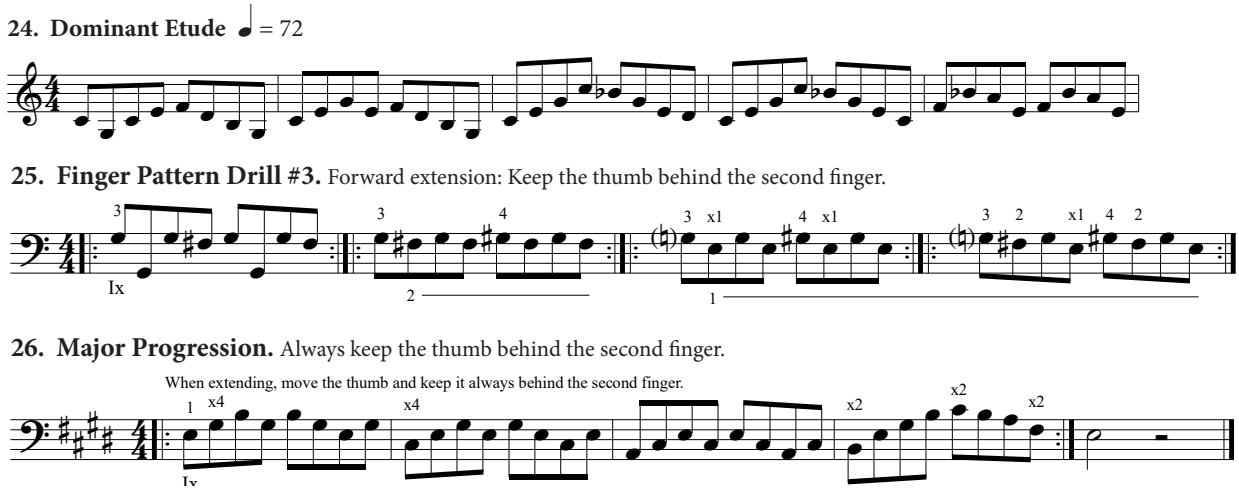
Especially in younger orchestras, allocate time at the beginning of rehearsals for reviewing hand, body and instrument position and technique.

- 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 have a zero tolerance policy for position problems and flaws—Don't be an enabler by allowing poor positions.

Finger Patterns Exercises and Etudes

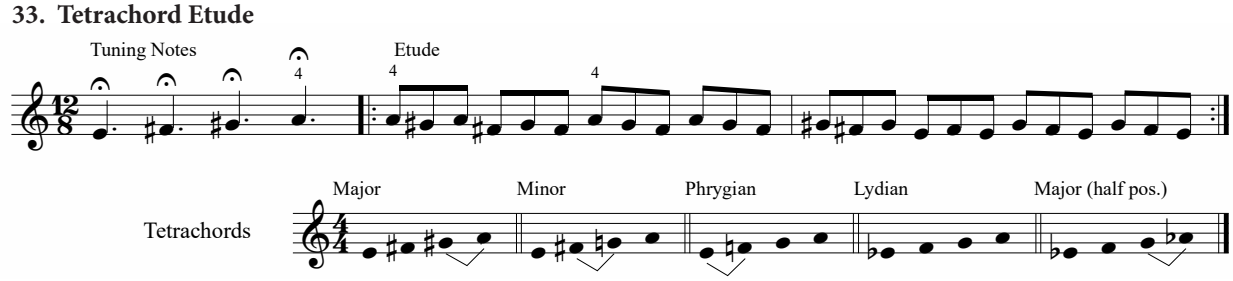
Use exercises and etudes to practice finger patterns in combination to improve students' muscle development. Use sequenced exercises that put finger patterns into a musical context.

Basics: Highs, Lows, Extensions



Tetrachord Etude

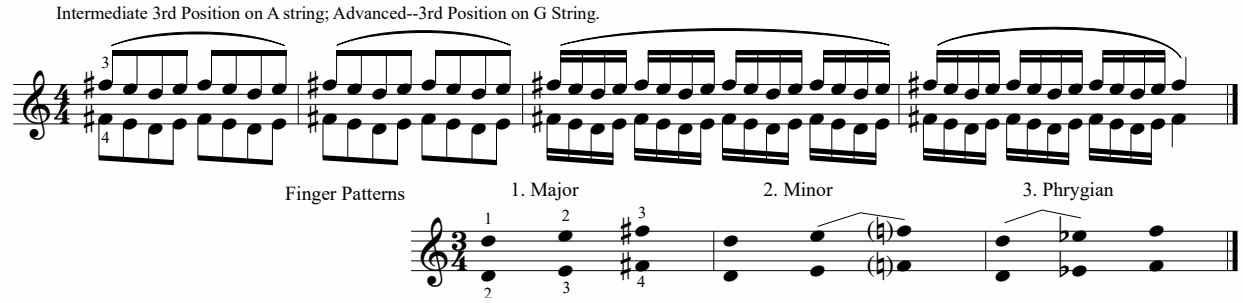
Use Tetrachord Etudes to efficiently focus on finger patterns as a daily warm-up or in a rehearsal to review the problematic finger pattern and transfer the pattern to the music. Cello students learn to shift between two positions, and basses learn bass pivot fingerings.



Develop Student Finger Pattern Strength with Velocity Etudes

Velocity exercises develop finger speed and accuracy while maintaining a relaxed left hand. They can also improve bow management and tone production. Teach one pattern at a time; then perform all three patterns in succession as a group without stopping.

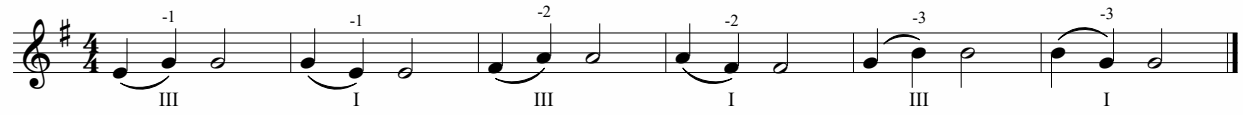
35. Velocity Etude



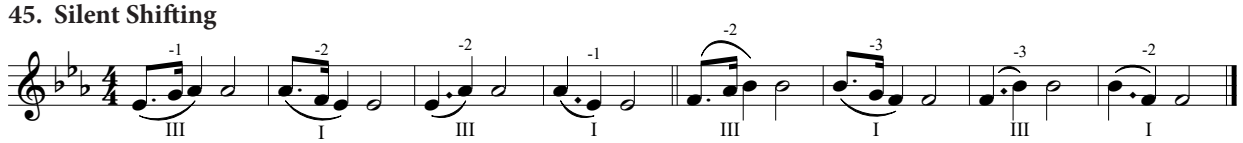
Shifting and Review

Use exercises that develop shifting skills throughout the entire range of the instrument. Help students develop well-balanced instrument positions to shift easily and correctly. Teach students about the different kinds of shifts: Both Same and Different Finger Shifts

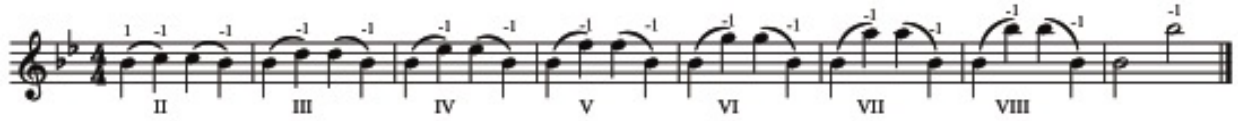
36. Shifting to the Same Finger. Move the thumb with the left hand.



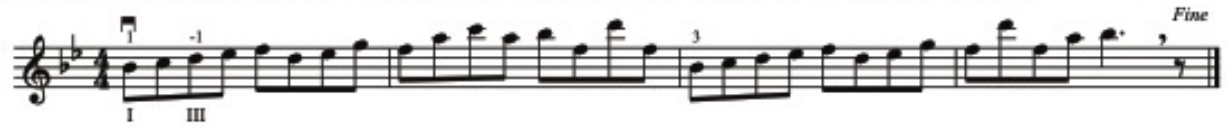
45. Silent Shifting



47. Full Range of Motion. Bring the elbow and arm around the instrument, and the thumb around the neck.



49. Etude and Variations in B-Flat. Practice this etude with the different slur and rhythm variations below.

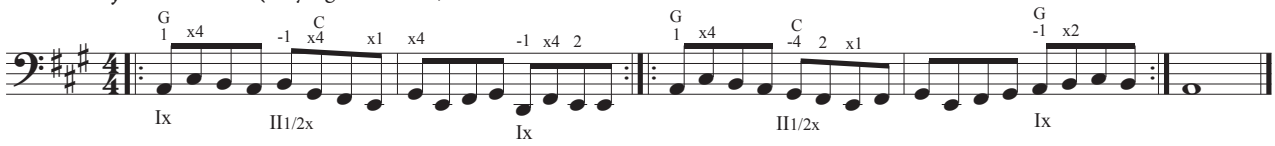


Crossing the Upper Level Threshold

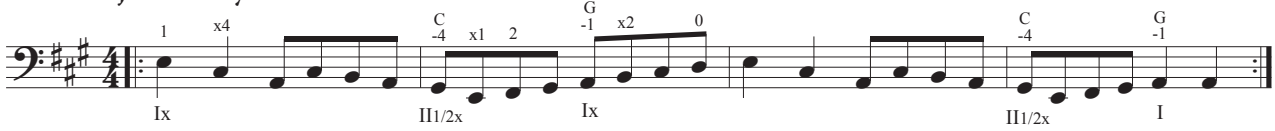
We need to teach students—especially cello students—how to get past the **G#/Ab Threshold** The reason these keys are harder for cellos is that they have to learn how to get around their instrument without an open string. By using carefully sequenced exercises to help cellists through this process, your orchestras will sound much better in tune. Because:

If the cellos are in tone, the orchestra isn't in tune.

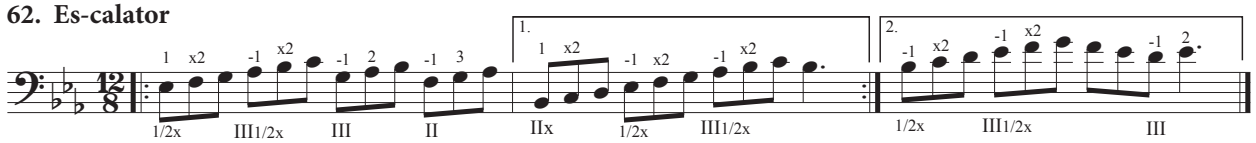
53. A Major Drill #1 (Playing G♯ in tune)



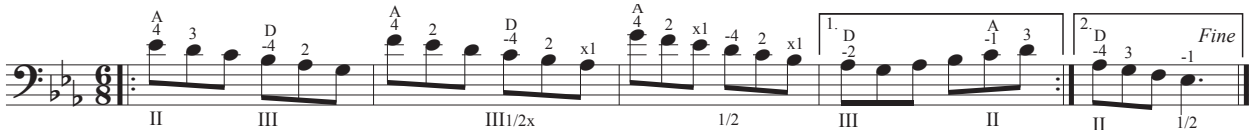
54. A Major Melody



62. Es-calator

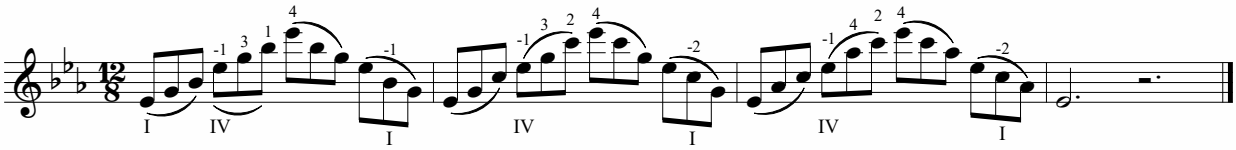


64. E♭ Etude (♩. = 50–100)

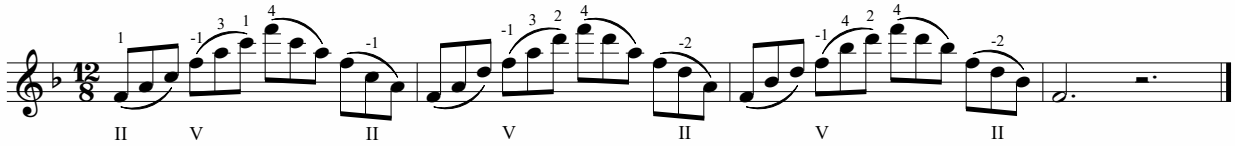


Upper Level: Improving arpeggio fluency across the instrument

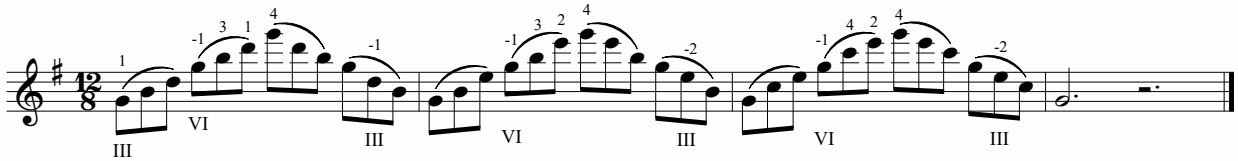
59. E♭ Major Two-Octave Arpeggios. Practice with different articulations and rhythms.



66. F Major Two-Octave Arpeggios. Practice with different articulations and rhythms.

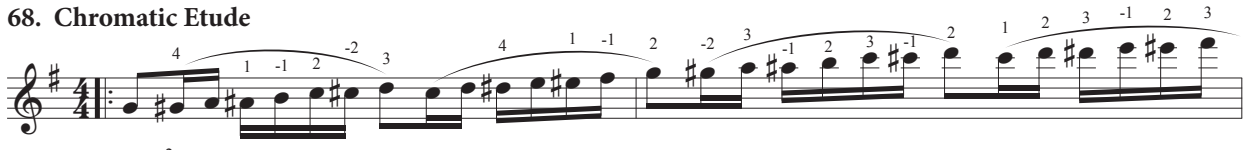


72. G Major Two-Octave Arpeggios. Practice with different articulations and rhythms.

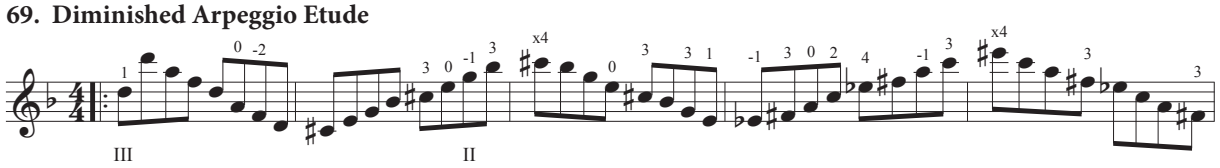


Upper Level: Teach students to play in keys with more than four sharps and flats. Take time to teach students how to play diminished patterns, thumb position, and alternate clefs that are required in higher positions. "Just figure it out yourself" and "go ask your private teacher" are *not* teaching strategies.

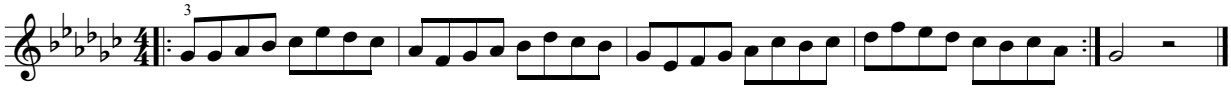
68. Chromatic Etude



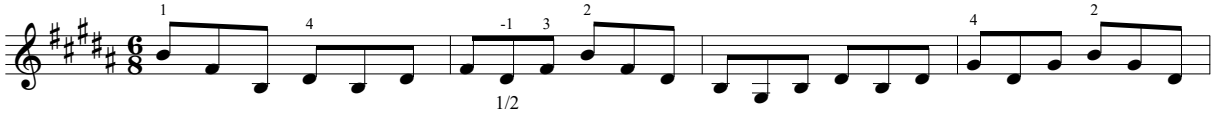
69. Diminished Arpeggio Etude



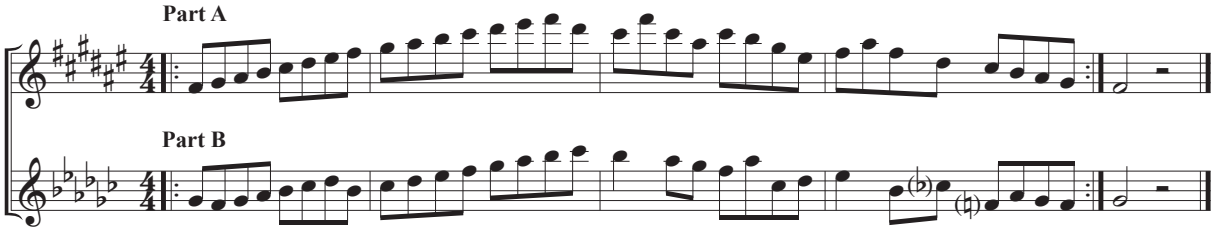
74. G♭ Drill



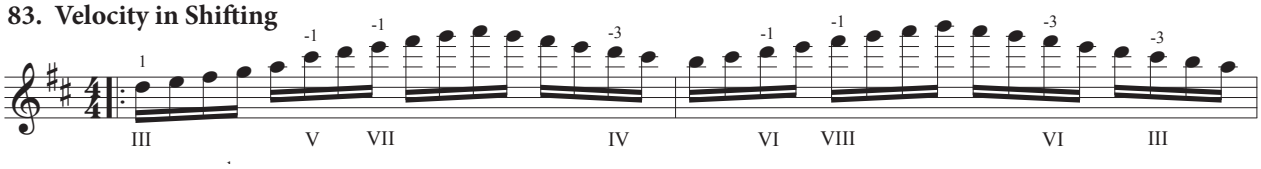
77. B Major Etude (On or off the string)



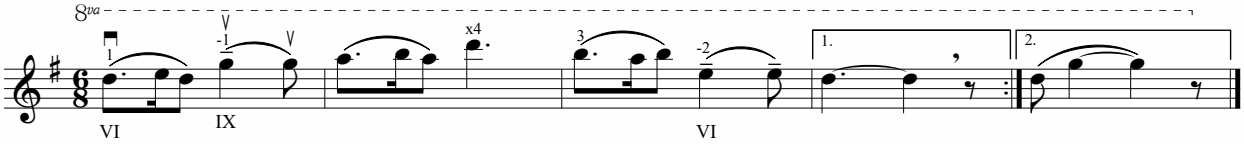
80. Enharmonic Duet (At the repeat, switch parts)



83. Velocity in Shifting



89. The Skye Boat Song. Play closer to the bridge and create a beautiful tone.



Music Theory Improves Tonal Literacy—and this can improve intonation

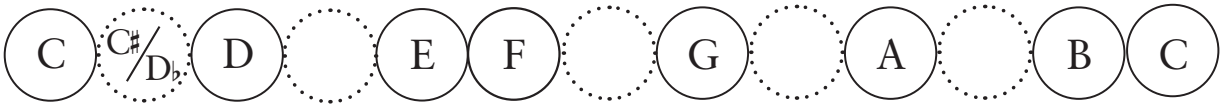
Students who understand where the notes are on the fingerboard are more likely to play the right notes and play them in tune. Stop and ask yourself honestly:

- Do my students ask questions like: "Is that a low 2 or a high 2?"
- Do my students understand the difference between F-natural and F-flat? Or F# vs. Gb?
- Can they explain how the key signature affects 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

1. 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♯ / D♭ .



2. Write the enharmonic spelling for each note below.

A♯ = _____ C♯ = _____ D♯ = _____ F♯ = _____ G♯ = _____

A♭ = _____ B♭ = _____ D♭ = _____ E♭ = _____ G♭ = _____

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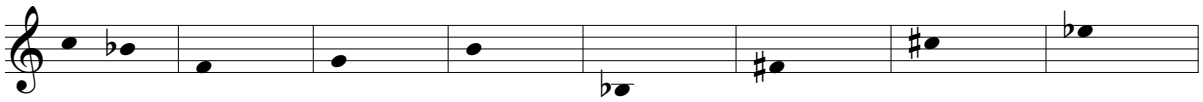
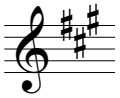
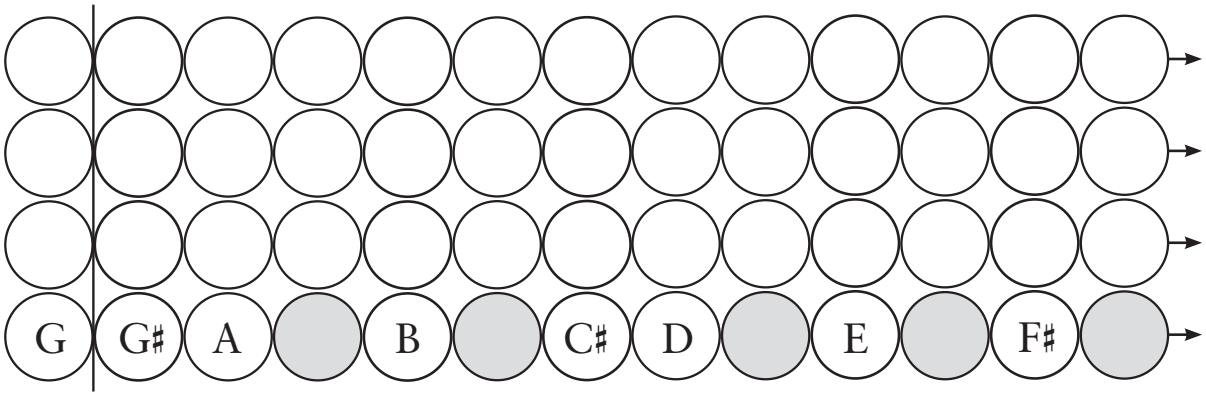
5. Write the note that is a *major second lower* than the given note, as shown in the first measure.



6. 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.





Part 6. Rehearsal Strategies for Finely Tuning Concert Music

Tuning as an ensemble requires students to listen and tune to other sections playing different notes in chords.

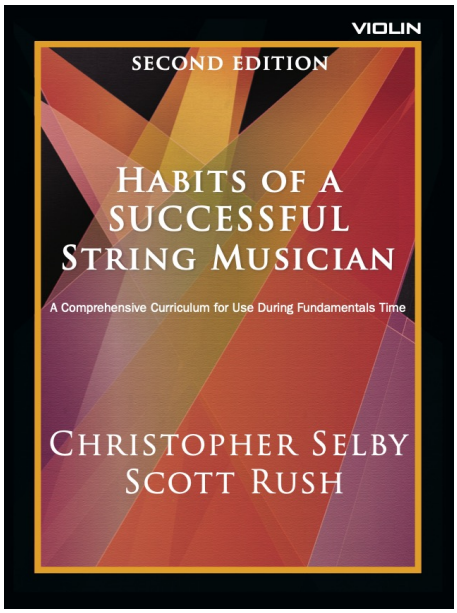
- **Select concert music that does not require unfamiliar patterns or positions.** Use technical exercises to introduce and practice new technical skills and finger patterns. After students can comfortably play these patterns in tune—show students how to apply these familiar skills in their concert music.
- **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.
- **Tuning double-stops and short chords**, often found at the very end of a piece.
    a. Play the chord as a whole note and tune it.
    b. Play as a half note and then quarter note, but always with beautiful tone.
    c. Students naturally play notes with short, crushed, stabbed tone. Lighten up a little and vibrate, and try to get even short notes to blend into the ensemble sound.
- **Pay attention to the leading tones—4th and 7th scale degrees.** Poor intonation is less about talent, and more about paying attention and focusing on playing in tune.
- **Finally, 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

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.*

Notes

NEW: *Habits of a Successful String Musician, Second Edition* is a complete method of over 400 musical exercises for teaching upper-level string students the technical skills needed to play advanced orchestral music.



What's NEW in the Second Edition?

- **Part I. Tone and Articulation:** New melodic exercises for developing tone, blend, vibrato, spiccato, and sautillé, and a rhythm canon for combining various articulations.
- **Part II. Left Hand Patterns, Positions, and Shifting:** Left-hand exercises are now organized into a sequence of musical exercises and etudes that review middle level skills, extend up to the highest registers, and teach alternate clefs and thumb position.
- **Part III. Scales, Arpeggios, and Thirds:** The much-loved tuning canons and chords, dominant arpeggios, and thirds, as well as one-, two-, and three-octave scales and arpeggios in all twelve major and minor keys now include improved cello and bass fingerings and bass scales with C-extensions.
- **Part IV. Chorales:** There are now 50 percent more chorales in a greater variety of keys and from more diverse cultural backgrounds.
- **Parts V. Rhythm Study in a Musical Context and VI. Sight-Reading:** 185 completely new rhythm charts and sight-reading exercises with tempo markings for each exercise.
- **Part VII. Orchestral Excerpts:** Three pages of excerpts from frequently performed school and all-state repertoire. Sequenced from moderately difficult to expert, these excerpts are the perfect culmination of skills taught in this method and are ideal for auditions or final exams.
- **Additional Sectional Pages** in each student book focus on technique and alternate clef lessons unique to each instrument.

Dr. Christopher Selby is the author of *Habits of a Successful Orchestra Director*, *Music Theory for the Successful String Musician,* and the lead string author of the *Habits of a Successful String Musician* method book series 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. He has been a leader in both NAfME and ASTA and holds degrees from The Hartt School and the University of South Carolina. Dr. Selby currently directs the high school orchestras at the School of the Arts in Charleston, SC. His orchestras have performed at the Midwest Clinic and have twice won the top award of Grand Champion at ASTA's National Orchestra Festival.