

An analysis and comparison of two level three method books to the ASTA curriculum

by

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B.M.E., The University of Kansas, 2018

A REPORT

submitted in partial fulfillment of the requirements for the degree

MASTER OF MUSIC

School of Music, Theatre, and Dance
College of Arts and Sciences

KANSAS STATE UNIVERSITY
Manhattan, Kansas

2026

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Abstract

Beginning string method books are prolific in the string music education world, and numerous studies have researched and analyzed the effectiveness and utility of those books in the classroom. There is currently a lack of research on level three string method books, both in analysis of content and comparisons to existing curriculum to assess utility. The purpose of this study is to analyze two level three method books, compare them to the established *ASTA String Curriculum*, and create a tool for string teachers to apply these available resources in their own curriculum. Two method books were selected, *Sound Innovations: Sound Development – Intermediate String Orchestra* and *Habits for a Successful Middle Level Musician*. The books were evaluated based on content, compared to each other, and organized to highlight correlations to the *ASTA String Curriculum* categories, content areas, and learning targets. This analysis also identified the level of skills included in each book to determine alignment with the *ASTA String Curriculum* developing or proficient levels. Once the two books were evaluated, strong relationships to the developing category were clear, and many of the exercises addressed right- and left-hand skills which correspond to the ASTA Category 1 (Executive Skills and Knowledge). Category 3 (Artistic Skills and Knowledge) had extremely limited representation in both books, representing some potential gaps in potential utility. Both books also had unequal skill representation across instruments, which could limit the application of skills in an ensemble setting. The included results, discussion, and appendices intended to serve as a foundation for teachers to understand the skills offered in each book, determine if there is application to their class curriculum, and empower them to use resources that bolster student technique and skills in executive, musical, and artistic ways.

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Acknowledgements

I would like to thank Dr. Rachel Dirks for everything she has done for me in my educational journey. She has been a pivotal and influential figure in my growth as a musician and educator.

I would also like to acknowledge Dr. Frederick Burrack, whose incredible way of thinking and educating challenged me to really dig deep and ponder many aspects of what it means to be an educator.

I would like to thank Dr. Syneva Colle, who pushed me to take my cello playing to another level, one that I didn't think possible without the guidance of an incredibly thoughtful and well-spoken teacher.

Lastly, I would like to thank Russell Clark, without whose unwavering support, encouragement, and belief in my abilities, I would not be here today.

Dedication

I would like to dedicate this paper to my father, James Sterbenz, whose pursuits in the academic world reinforced his infallible belief in equal and free access to all knowledge and information for the people.

Chapter 1 - Introduction

As a young string educator with four years of teaching experience, I was interested in exploring method books for intermediate musicians, specifically level three method books. I noticed that there were a substantial number of reviews and analyses (McDevitt, 2022) on book 1 (beginning method book) and a limited number of analyses on book 2 method books, yet little to no analysis on the third level of method materials. While the application of method books for intermediate players is dependent upon external factors, the utility of the method book is still highly appropriate for the classroom. Intermediate string classes, especially during the third year of instruction, shift focus from purely technical skills to the application of those skills in works with the intention of being performed in the literature. That does not mean teachers no longer introduce new skills, nor does that mean that reinforcement and refinement of previously learned techniques no longer occur. Instead, the application of level 3 method books is much more flexible. Nevertheless, without an analysis of the content of these books, it can be difficult to utilize these books in a classroom setting. By providing my own analysis and comparisons of the two method books, I hope to contribute to usable resources for teachers so that they can more quickly understand the content and application of these books.

Given the ever-shifting nature of music education, I wanted to review two current level 3 method books currently published for heterogeneous string classes to determine their potential utility in the classroom. To achieve this, I selected an established string curriculum published by the American String Teacher's Association (ASTA) that is intended to be applicable to string education at a national level and is currently used by many string teachers. I utilized the *American String Teachers Association (ASTA) String Curriculum* as a tool for comparison, which gave me a framework with which to divide up and analyze each exercise for its content,

while also assessing the appropriateness of each exercise to the level of the intended group of students.

Given the complexity of classroom instruction, orchestras in their third year will be at a different place in their learning journey. However, by comparing these methods to the *ASTA String Curriculum*, the data provides a measurable and concrete set of skills by which to organize and analyze each exercise. This process of analysis is designed to help teachers select the exercises that best fit the skills they are trying to address in an appropriate way. Additionally, the teacher must spend appropriate time with the curricular materials to help mitigate the spread of student ability levels, or substantial problems may occur in the second and third year classes (Dillon-Krass & Kriechbaum, 1978).

The purpose of a study done by McDevitt (2022) was to realize the content and materials currently available of book 2 method books and use the analysis and comparisons to best utilize them for the appropriate pacing of each unique classroom. My research will add to this foundation and provide a guide to enable teachers to utilize book 3 method books in a way that best serves their classroom by clearly outlining and organizing the technical focus of each exercise and how it may align with the ASTA levels of skill delineation.

General Overview

Chapter two of this paper will consist of a review of literature exploring the beginning of the string method book, ASTA and the ASTA curriculum, guidelines for method book selection, and a discussion of the two books I selected to analyze. The third chapter will lay out the method of how I analyzed *Sound Innovations* and *Habits* and organized the exercises to compare the two books. Chapter four will focus on my findings and the alignment I found between the proficient and developing categories of the *ASTA String Curriculum*. The fifth and final chapter will

include how I interpret these results and the implications for the classroom and how this information can be utilized.

Chapter 2 - Review of Literature

Brief History of String Method Books

String instruction has changed drastically in the public school system over the past century. Initially, string education in America began around the 1850s similar to other instrumental music teaching occurred; as either private lessons or in group classes through a music academy (Keene, 2009). With the exception of a few schools, more formal orchestra classes appeared in the early 1900's in the majority of schools as an extra-curricular time after the school day (Weinert, 2025). Because most students received private lessons at home or at a music academy, the purpose of these ensembles was to rehearse pieces to perform at school functions rather than to teach students how to play (Jeung, 1999; Mark & Gary, 2007). As string classes began to transition further to include pedagogical and technical instruction, accompanying materials needed to adapt to fit teachers' and students' needs (Jeung, 1999).

Some of the earliest written method books for strings emerged from four prominent figures in the establishment of string group classes, each who wrote their own method to accompany the needs of their class: Lewis A. Benjamin, Sr., Joseph Howell, Albert G. Mitchell, Paul Herfurth, and Lewis Gordon (Jeung, 1999; Keene, 2009; McDevitt, 2022; Sollinger, 1970; Weinert, 2025). One of the earliest string educators was Lewis A. Benjamin, Sr., who "was the earliest 'music man' to successfully teach orchestra instruments in classes in the United States" (Sollinger, 1970, p. 43). He published the method book titled *The Musical Academy* in 1851 which noted on the cover and title page that it was "designed for instrumental classes." This book was the first to include pieces written in three-part harmonizations with one part in bass clef (Keene, 2009). Another string educator was Joseph Howell who published a violin class method book in 1859 entitled *New Class Book* (Keene, 2009). In contrast to Benjamin's method,

this book was intended for a homogeneous class of violin students. While Howell's book is notable, Jeung (1999) observed that "one of the first and most influential [method books] was the violin method written by Albert G. Mitchell in 1910" (p. 7) titled *Class Method for the Violin*. Lastly, two influential educators, Lewis Gordon and Paul Herfurth, both wrote method books for their classes which consisted of a heterogeneous ensemble setting. Lewis Gordon, a pivotal figure in the inclusion and promotion of orchestras in the public school, wrote his own method series in 1915 titled "School and Community Orchestra" of which the two books "were possibly the first classroom instruction books that included all instruments." (Weinert, 2025, p. 11). McDevitt (2022) observed that in 1923 Paul Herfurth, wrote what might be the first heterogeneous string class method" (p.3) intended for a group class of all stringed instruments (violin, viola, cello, and bass).

Even as group classes became more prevalent in formal education and heterogeneous string instruction became more commonly offered, many books were written with pedagogy and instruction that included concepts and skills that primarily catered to the violin (McDevitt, 2022). This was likely due to the majority of teachers being violinists and violin teachers (McDevitt, 2022). This is still the case today, as Smith et al. (2018) confirmed that the majority of orchestra teachers' primary instrument is violin. Combined with many prominent pedagogues and writers of current method books also having background primarily in violin (Murphy, 2024), method books today still present most of their content and sequence with a violin-focused mindset. This leaves cellos and basses to be exposed to more complex skills with less introductory material and are left to conform to the violin sequence and structure (Jeung, 1999).

Method books encountered a lot of other changes as the needs of the string ensemble class changed. According to Jeung (1999), "Early [method] books contained only basic

instructional information; formats were brief, concise, and offered little or no supplementary information for the teacher or student to aid in the processing of the material” (p.9). For example, the beginning method books by both Benjamin and Howell were short and contained seventeen to eighteen popular well-known tunes and/or hymns (Keene, 2009). Historically, string method books focused on “the hammering out of the dull scale routines” (p.3) and introduced musical concepts very early in the sequence (McDevitt, 2022). These practices have greatly changed in the past forty years, as method books published after 1980 started to include more standard components, such as conductor scores, instructional strategies and information, activities, illustrations, pictures, and even color printing (Jeung, 1999). Jeung (1999) postulated the increase in non-string player teachers and self-taught students was a reason for the increase in information included in method books. Jeung (1999) summarized the current utility of string method books in today's classrooms as assisting teachers with outlining the curriculum, organizing the content into an appropriate sequence, serving as an evaluation of the success of the class, and selecting literature.

While many method books serve as a teacher tool for sequencing, evaluation, and literature selection, most string method book series begin with the foundation of instrument knowledge in the form of technical skills. As cited by McDevitt (2022), another dissertation analyzing method books written by Lobrot in 1963 mentions that these beginning method books have been considered to be more important than subsequent books in a particular series. Book one in a method series is generally finished after the first-year string program, and book two is often used throughout the second year and as far into high school orchestra curricula (McDevitt, 2022). Nonetheless, the diversity of string programs across the nation makes it difficult to generalize method book levels to a specific year or grade level. Book two of a method sequence

typically reinforces technical skills that are no longer at the beginning level. But where does this leave us for book three? After my analysis, I would like to suggest that McDevitt's assertions of the utility of method book two at the high school level are incorrect and explore this further in the discussion.

Brief History of ASTA and the ASTA Curriculum

The American String Teacher Association (ASTA) was formed in 1946 to create a body of organized individuals who could fill a necessary gap in resources and research for string education ("About ASTA / History", n.d.). This organization grew to include over 6000 members nation-wide, and publishes two journals, the *American String Teacher* and the *String Research Journal*.

The *ASTA String Curriculum* is a document compiled by researchers and teachers in the field of music education in order to serve as a guide for string curriculum, standards, and assessment (Benham et al., 2021). The curriculum was written with the intent to "help guide discussions and research in string pedagogy, provide a curriculum framework for K-12 and studio teachers, help administrators and educators in evaluating instruction, and serve as an advocacy tool for strengthening string programs around the country" (ASTA Curriculum, 2021, p. 5). Prior to the publication of the *ASTA String Curriculum*, there were no specific national standards for string ensemble courses outside of the National Association for Music Education (NAfME) *2014 Music Standards (Ensemble)*, which was comprehensive for band, choir, and orchestra (Murphy, 2024). String educators noticed this gap, and in 2011, published the first edition of the *ASTA String Curriculum* (Benham et al., 2021). This comprehensive document offers established performance benchmarks through a developed scope and sequence with curricular guidelines and specific teaching strategies (Roberts, 2011). With the numerous

resources and information provided, “it’s a road map to which teachers – those trained on strings or other instruments – can refer to make sure their string classes are on track delivering the requisite skills” (Williams, 2011, p.17).

The current edition of the *ASTA String Curriculum* was published in 2021 and was intended to serve as a living document that will evolve and adjust based on information learned from research and best practices in string education (ASTA, 2021). The *ASTA String Curriculum* (2021) stated that the utility of this curriculum is comprehensive, sequential, flexible, and open-ended. Following the document’s first ten years, the association was also able to track and obtain feedback from educators on the curriculum and received confirmation of its utility. “Teachers have affirmed that the model in this curriculum has been useful, practical, and implementable in ways that help them become more efficient and effective at instruction” (Benham et al., 2021, p. 5).

Selection Process of Method Books

There have been many articles, books, and dissertations written about the selection process for a beginning method book (McDevitt, 2022). This evaluation process, however, should continue after the first-year method book. Educators should also be consistently reviewing books they have selected, as the search for new and better materials is an ongoing process (Tatton, 1994). Hamann and Gillespie (2013) identified six factors for educators to consider when reviewing and selecting a method book: appearance, assessment, content, structure, supplements, and approach. Laux (2022) added additional considerations, such as age/maturity of students, class size, environment, funding, and length/frequency of classes. Another important factor exclusively mentioned by Tatton (1994) was the importance of relevancy, which he defined as

the playing of “familiar tunes and singing in class” (p. 67). This allows teachers to increase learning speed when trying to reinforce or teach new techniques or skills.

It is important to recognize that “the defining criteria for the perfect method book will be slightly different for each group” (Tatton, 1994). Many pedagogues reiterate and the selection process ultimately needs to be student centered and in the best interests of their musical and technical growth (Hamann & Gillespie, 2013; Jeung, 1999; Jessellson, 2013; Cooper, 2015). Because this selection process will look different for every teacher, student, and classroom, it is important to remember that “the particular method book chosen is only a tool to help teach class” (Tatton, 1994, p. 65). Laux (2022) reiterated that “because there is no perfect book, most teachers will customize their curriculum with other books, handouts, and resources to be most effective” (Choosing a String Method Book section, para. 3), especially in the intermediate classroom. Johnson (1942) echoed with this sentiment and adds “the experienced teacher, or course, never depends entirely on the offerings of basic methods, but this should not minimize their importance to the string class” (p. 14). McDevitt (2022) went further by stating “the teacher must be prepared to know the contents of the second book in order to proceed the following year which may or may not be the right time for his or her class” (p.5). While this referred to book two specifically, it applied equally to book three method books. Murphy (2024, p. 33) summarized that “many method books are designed as curricula and are used in combination with repertoire to make string orchestra curricula in local schools,” emphasizing an importance of aligning a string curriculum with the chosen method book and vice versa.

Due to the lack of research combining the ASTA curriculum and current third level string method books, this research aims to compare and analyze two level three method books and how they align with the *ASTA String Curriculum*. The goal of this analysis is to create a tool for string

teachers to utilize in their own curriculum as they align with the provided curriculum. The research questions for this study are:

1. How do the exercises in two selected method books align with the established Categories, Content Areas, and Learning Targets provided by the *ASTA String Curriculum*?
2. How can teachers use these method books as tools in their classroom to teach appropriate level techniques?
3. How can these books be used to reinforce ASTA curricular sequencing for the intermediate level orchestra class?

Chapter 3 - Methods

The following method was designed to categorize and organize the exercises included in two level three string method books and identify what skills each individual exercise addresses. I chose to use the *ASTA String Curriculum* because I could not find a national or state curriculum for strings that is required in American public schools. This curriculum has been a reputable and accepted curricular sequence in the professional string education community (Benham et al., 2021). Since this resource is used by string teachers across the country, comparing this curriculum to the two method books selected is intended to provide a clear connection to relevant skills and techniques being taught in the string ensemble classroom. Rather than creating a year-by-year sequence, the *ASTA String Curriculum* addresses and provides a comprehensive collection of musical and technical skills sorted by them by the playing levels: baseline, developing, proficient, and advanced (Benham et al., 2021). The *ASTA String Curriculum* states that the developing level “is an extension of beginning-level technique; demonstrates more mastery of basic skills, moving into intermediate-level playing skills” as compared to the proficient level where “students demonstrate mastery of beginning and intermediate-level skills and perform with fluency and understanding. Typically, proficiency is developed by middle school level, but depending on the items above, it may not be developed until high school level” (Behnam et al., 2021, p. 24). Descriptions of the baseline and advanced levels are also included for context. The baseline level contains skills that are “basic priority-level items for any beginning student” and is “typically found during the first and/or second year of instruction” (Benham et al., 2021, p. 24). The advanced level is where students should aim to be when they leave the public-school program and includes skills that should have the capacity to further their understanding of music and artistry beyond the classroom.

The first step in this analysis included an identification of the standards and learning targets for the proficient level and created a table with each row aligning with a learning target. Table 3.1 is an example of how each exercise that could be used to introduce or reinforce the corresponding skill is organized. The full table is included in Appendix A.

Table 3.1

Example of SI and Habits Exercise Alignment with ASTA String Curriculum

Category/Content Area	Learning Target	<i>Sound Innovation</i> Exercises	<i>Habits</i> Exercises
1C) Right-Hand S/K	2.1 - Extending the détaché bow stroke	42, 43	1, 2, 3, 7, 9

Initially, I planned to analyze four method books at the third level from some of the most commonly used, recently published/revised, and well-known series (*Essential Elements*, *String Basics*, *Habits of a Successful String Musician*, *Sound Innovations*). One limitation is that very few string method book series expand past level 2. Additionally, two other well-known level 3 method books, *All for Strings* (1990) and *Strictly Strings* (1996), were both published before 2000, making them more difficult for teachers to acquire for their classes and their content less relevant than more recent publications. I started with this selection of four books because I wanted this analysis to not only compare books that teachers are already using in their classrooms to increase the relevancy of my work, but also to show teachers that using one book may not be the most effective way to teach every skill. An intended outcome of this research was to save teachers time and money if they do not have prior experience with these books.

After an assessment of the four method books, I refined my selection to two books in order to ensure a deeper analysis and comparison to the ASTA curriculum. The books I selected

were *Sound Innovations Intermediate Exercises (Sound Innovations)* and *Habits of a Successful Middle Level String Musician (Habits)*. I chose these two books because they were some of the most recently published, are currently being used by teachers in string ensemble programs and are currently reasonably priced and easily acquirable for programs. The method for exploring these two books is described in detail in the following paragraphs.

Analysis

When I began the analysis of the exercises in *Habits*, I quickly noticed that the skills in each exercise did not align well with the proficient level of learning targets in the *ASTA String Curriculum*. Beginning method books typically address skills in the beginning level with level 2 books transitioning students to more complex techniques addressed in the developing level. My assumption was that level 3 would then move students along from developing to proficient and would be more applicable to high school level techniques, I soon discovered, however, that many of the skills addressed in the exercises align more closely with the developing level. With these findings in mind, I chose to compare the two method books to the developing and proficient levels to determine which would address the most skills used in both books. The table was modified to include developing learning targets in addition to the proficient learning targets. Table 3.2 provides an example of how final comparisons were organized. Full comparisons are included in Appendix B.

Table 3.2

Example Table of exercise breakdown for developing and proficient levels of both method books

Learning Targets - Developing	SI	Habits	Learning Targets - Proficient	SI	Habits
1C.2.1	2	5	1C.3.1	4	0

After breaking down the components of each exercise in both method books, I assigned them to the corresponding learning target within the *ASTA String Curriculum*. Some exercises intentionally addressed one skill, while others required multiple aspects of technique to be performed correctly. My organization of exercises to corresponding skills included the primary targeted technique, alongside the other techniques needed. For example, exercise #6 from *Sound Innovations* (Figure 3-1) addresses two developing learning targets from two different categories: 1C.2.5 (extension of technique related to control of tone-production variables) and 2B.2.1 (rhythmic patterns containing subdivisions).

Figure 3-1

Example exercise from Sound Innovations that addresses more than one learning target

6 **PLAYING IN THE PIANISSIMO (*pp*) LANE**—Place your bow in the pianissimo (*pp*) lane very near the fingerboard and tilt your bow stick toward the scroll. Challenge: Perform Playing in the Fortissimo Lane and Playing in the Pianissimo Lane as one piece.

The musical score for exercise 6 is presented for five instruments: Violin, Viola, Cello, Bass, and Piano. The key signature is one sharp (F#) and the time signature is 4/4. The Violin, Viola, Cello, and Bass parts all play a continuous eighth-note pattern, with the Cello and Bass parts including a '-4' marking. The Piano part features a melody with chords D, A7, G, D, G, D, A7, D, and a bass line with two marked measures (1 and 2). All parts are marked 'pp'.

Initially, I looked at the music portion of the exercise, followed by examining the informational text that accompanied each exercise in the teacher editions. The *Sound Innovation* book included paired instructional materials called “Sound Advice” and “Challenges” that

contributed to the skills reinforced or introduced in a number of exercises. The *Habits* book included “Teacher Tips” with many exercises that offered pedagogical information for the teacher, as well as extensive appendices. I included only the tips that directly impacted how the exercise would be performed by students as well as if the tips included additional skills. The exercises in which the paired instruction addressed a learning target are surrounded by brackets “{}”.

After the analysis and organization of each exercise, I used Excel to gather exercise totals found in each book for all learning targets, content areas, and Categories. To count each exercise, I used Excel formulas and manually counted the cells that included few exercises. Since many of the cells included a large number of individual exercises and ranges, AI was used in a limited capacity to assist with counting totals. The more expansive cells were counted using AI to compile totals without duplicate exercises and were double checked to ensure accuracy. Many exercises addressed multiple learning targets, so duplicate exercises were removed and counted only once to ensure that totals and percentages were accurate. Because the same exercises could appear in multiple content areas or categories, the percentages don’t add up to 100 but rather include the total percentage of exercises that connect with each content area or category. For instance, *Sound Innovations* exercise #6 (Figure 3-1) is represented in multiple categories because the skills it utilizes fit in content area 1C as well as 2A. This particular exercise is included in the final totals for both category 1 and category 2.

For Learning Target 1B.2.3, Refinement of Shifting, and 1B.3.2, Advanced Positions (fifth and higher), I included exercises that had shifting for every instrument. In *Habits*, basses start shifting from exercise 16 onward, and cellos start shifting after exercise 40, while a more limited number of exercises include shifting for every instrument. Those were the exercises

included in the total to ensure that it would be useful in a heterogeneous setting. Exact breakdowns are listed in Appendix A. Additionally, *Sound Innovations* also included a high number of exercises that contained shifting for lower strings and not upper strings, so I employed the same method of inclusion when counting the totals and finding percentages.

Throughout the analysis process, each exercise was organized to maximize the applications of these methods in the most inclusive way for any program. The goal of including each exercise that aligns with a specific learning target outlined by the ASTA curriculum, teachers can use this as a guide to select the exercise that is most appropriate for the skill that aligns with their overall class objectives and the current skill level of their ensemble. The following results and discussion chapters highlight this analysis and how teachers can apply the specific findings to support student learning.

Chapter 4 - Results

The analysis of exercises from both method books revealed clear points of alignment and divergence between the selected books and the *ASTA String Curriculum*. Much of the data is presented in reference to the *ASTA String Curriculum* categories, content areas, and learning targets. Categories and the corresponding content areas can be found in Table 4.1, and the expanded list that includes learning targets can be found in Appendix A. Many of the exercises revealed a strong connection to content areas 1B and 1C, which address right- and left-hand technical skills. The next strongest connection occurred in content area 2B, which addresses rhythmic skills. Category 3 overall had very limited exercise alignment in either book.

Table 4.1

ASTA String Curriculum Categories and Content Areas

Categories	Content Area
1) Executive Skills and Knowledge	1A) Body Format
	1B) Left-Hand Skills and Knowledge
	1C) Right-Hand Skills and Knowledge
2) Musicianship Skills and Knowledge	2A) Tonal Aural Skills and Ear Training
	2B) Rhythmic Aural Skills and Ear Training
	2C) Creative Musicianship
	2D) Music Literacy
	2E) Ensemble Skills
3) Artistic Skills and Knowledge	3A) Expressive Elements
	3B) Historical and Cultural Elements
	3C) Evaluation of Music and Musical Performance

Sound Innovations: Sound Development – Intermediate String Orchestra

Sound Innovations currently includes a series of five books that spans beginning strings through the “advanced” exercises book. The book I analyzed is called *Sound Innovations: Sound Development – Intermediate String Orchestra*. While this book is not labelled with the qualifier “level 3”, it is considered to be the 3rd book in the series and is intended to be used after completion of their book entitled *Sound Innovations Book 2*. Published in 2012, *Sound Innovations: Sound Development* contains 240 exercises with the main sections targeting Tone, Bowings, Shifting, and Application (scales, arpeggios, chords, and rhythms). This book is not intended to be used sequentially but rather as a supplement in which “the levels can be used in any order, either as individual warm-ups or structured units, so you can create the best sequence for your development” (Phillips & Moss, 2012, p. 1). See Appendix 3 and Appendix 5 for more information. Table 4.2 contains the number of exercises sorted into *ASTA String Curriculum* categories. Even if the exercise addresses multiple content areas, each exercise within the category is only counted once when calculating the total in the category. However, an exercise may address more than one category so may be included in multiple times overall category totals.

Table 4.2

Sound Innovations Developing and Proficient Level Category Alignment

Categories	<i>Sound Innovations</i> - Developing	<i>Sound Innovations</i> - Proficient
1	95% (n=227)	17% (n=17)
2	41% (n=101)	1% (n=3)
3	17% (n=43)	0.41% (n=1)

At the developing level, of the 240 exercises in *Sound Innovations*, 227 (96%) exercises corresponded with Category 1, 101 (41%) exercises corresponded with Category 2, and 43

(18%) exercises that corresponded with Category 3 (Table 4.2). Every content area had at least two corresponding exercises except for content area 1A (body format), which did not include any exercises that reinforced this concept. The content area that aligned with the most exercises was 1B (left-hand skills), which included 125 (51%) of exercises that addressed the associated learning targets.

For the proficient level, *Sound Innovations* had 17 (7%) exercises that corresponded with Category 1, 3 (1%) of exercises that corresponded with Category 2, and 1 (0.42%) exercise that corresponded with Category 3. Only content areas 1B (left-hand skills), 1C (right-hand skills), 2B (rhythmic skills), and 3C (evaluation of music and performance) were addressed, with no exercises in the remaining content areas (Table 4.3).

Table 4.3

Sound Innovations Content Areas Alignment

Content Areas	# of Exercises - Developing	# of Exercises - Proficient
1A	0% (n=0)	0% (n=0)
1B	51% (n=125)	2.86% (n=7)
1C	36.73% (n=90)	4.08% (n=10)
2A	0.82% (n=2)	0% (n=0)
2B	29.39% (n=72)	1.22% (n=3)
2C	2.04% (n=5)	0% (n=0)
2D	5.71% (n=14)	0% (n=0)
2E	0.82% (n=2)	0% (n=0)
3A	0.82% (n=2)	0% (n=0)
3B	16.33% (n=40)	0% (n=0)
3C	2.86% (n=7)	0.41% (n=1)

Developing and proficient levels and their alignment to each content area are compared in Table 4.3. Overall, most exercises in *Sound Innovations* addressed learning targets in the developing level with a handful of exercises that addressed learning targets in the proficient level (Table 4.3; See Appendix C for a full comparison of *Sound Innovations* to the *ASTA String*

Curriculum learning targets in both the developing and proficient levels, and Appendix E for a full summary of all exercises included in the book).

Habits of a Successful Middle Level String Musician

Habits of a Successful Middle Level String Musician (Habits) was published in 2017 after the first book, *Habits of a Successful String Musician*. The middle level book is intended to be used after any level 2 method book, promoting skills used in “orchestra music of moderate difficulty (level 3-5)” (Moon et al., 2017, p. vi). This book contains 360 exercises, with sections targeting Tone/Articulation, Finger Patterns, Shifting and Positions, Scales/Arpeggios/Thirds, Chorales, Rhythms, and Sight Reading. In addition to the exercises, this book includes extensive teacher materials for most exercises, such as specific pedagogical information, rubrics and assessment tools at the end of each section, and appendices that supply additional strategies for teaching intermediate (developing and proficient) skills. While the book is laid out sequentially (Moon et al., 2017), it is mentioned in *Habits of a Successful Orchestra Director* that *Habits* method book is more of a supplementary method as “sequential method books are less effective for upper-level orchestras” (pp. 180-181) due to varying levels of ability and experience, and the focus on rehearsal and performance of repertoire (Selby, 2016).

Table 4.4

Habits and Proficient Level Category Alignment

Categories	<i>Habits</i> - Developing	<i>Habits</i> - Proficient
1	68% (n=246)	4% (n=16)
2	79% (n=286)	11% (n=38)
3	4% (n=16)	0% (n=0)

At the developing level, *Habits* had 246 (68%) exercises that corresponded with Category 1, 286 (79%) exercises that corresponded with Category 2, and 16 (4%) exercises that

corresponded with Category 3 (Table 4.4). Every content area had at least seven corresponding exercises except for content areas 2C (creative musicianship), 3A (expressive elements), and 3C (evaluation of music and performance); no exercises reinforced learning targets in these three content areas. The content area that had the most exercises aligned with it was 1B (left-hand skills), which included 200 (55%) exercises that addressed the associated learning targets.

For the proficient level, *Habits* had 16 (4%) exercises that corresponded with Category 1, 38 (11%) of exercises that corresponded with Category 2, and 0 (0%) exercises that corresponded with Category 3. The content areas addressed were 1B (left-hand skills), 1C (right-hand skills), 2A (tonal aural skills), and 2D (music literacy), with no exercises in the remaining content areas.

Table 4.5

Habits Exercises and Their Alignment to the ASTA Curriculum Content Areas

Content Areas	# of Exercises - Developing	# of Exercises - Proficient
1A	1.94% (n=7)	0% (n=0)
1B	55.56% (n=200)	2.22% (n=8)
1C	21.39% (n=77)	1.39% (n=5)
2A	12.22% (n=44)	1.39% (n=1)
2B	43.44% (n=156)	0% (n=0)
2C	0% (n=0)	0% (n=0)
2D	13.33% (n=48)	8.89% (n=32)
2E	15.56% (n=56)	0% (n=0)
3A	0% (n=0)	0% (n=0)
3B	4.44% (n=16)	0% (n=0)
3C	0% (n=0)	0% (n=0)

Overall, *Habits* had many exercises that addressed learning targets in the developing level with a handful of exercises that addressed learning targets in the proficient level. (Table 4.5; See Appendix D for a full comparison of *Habits* to the *ASTA String Curriculum* learning

targets in both the developing and proficient levels, and Appendix F for a full summary of all exercises included in the book.

Comparisons

Table 4.6 and 4.7 outline the total number of exercises that align with the *ASTA String Curriculum* content areas in both the developing and proficient levels. For developing skills, *Sound Innovations* had a higher percentage of exercises that addressed skills in Category 1, however the total number of printed exercises in *Habits* was greater than *Sound Innovations*. *Habits* had a higher percentage of exercises that addressed skills in Category 2, while both method books had a low number of exercises with skills correlating to Category 3, although *Sound Innovations* had a higher percentage than *Habits*.

Table 4.6

Comparisons of Sound Innovations and Habits in Developing Content Areas

Content Areas	<i>Sound Innovations</i>	<i>Habits</i>
1A	0% (n=0)	1.94% (n=7)
1B	51% (n=125)	55.56% (n=200)
1C	36.73% (n=90)	21.39% (n=77)
2A	0.82% (n=2)	12.22% (n=44)
2B	29.39% (n=72)	43.44% (n=156)
2C	2.04% (n=5)	0% (n=0)
2D	5.71% (n=14)	13.33% (n=48)
2E	0.82% (n=2)	15.56% (n=56)
3A	0.82% (n=2)	0% (n=0)
3B	16.33% (n=40)	4.44% (n=16)
3C	2.86% (n=7)	0% (n=0)

When comparing proficient skills, both method books included a much more limited variety of exercises. Overall, *Habits* included a greater number of exercises in Category 2. *Sound Innovations* had a greater percentage of exercises that aligned with Category 1 and 3. Of the three most represented content areas in both books, 1B (left-hand skills) had similar

representation in both books, while *Sound Innovations* had a greater number of exercises connecting with content area 1C, and *Habits* had stronger representation in content area 2B (rhythmic skills). Other areas of considerable deviation between the two books include content area 2A (tonal aural skills), 2E (ensemble skills), and 3B (history and culture). Category 3, while not considerably present in either book, had considerably more exercise correlation included *Sound Innovations* with each content area containing at least one exercise. Contrastingly, the exercises *Habits* included only content area 3B.

Table 4.7

Comparisons of Sound Innovations and Habits in Proficient Content Areas

Content Areas	<i>Sound Innovations</i>	<i>Habits</i>
1A	0% (n=0)	0% (n=0)
1B	2.86% (n=7)	2.22% (n=8)
1C	4.08% (n=10)	1.39% (n=5)
2A	0% (n=0)	1.39% (n=1)
2B	1.22% (n=3)	0% (n=0)
2C	0% (n=0)	0% (n=0)
2D	0% (n=0)	8.89% (n=32)
2E	0% (n=0)	0% (n=0)
3A	0% (n=0)	0% (n=0)
3B	0% (n=0)	0% (n=0)
3C	0.41% (n=1)	0% (n=0)

By breaking down each category into the content areas, the division of focus is clearer to see. Both *Sound Innovations* and *Habits* have the largest number of exercises represented in content area 1B at the developing level which addresses left-hand skills and knowledge. Content area 1C at the developing level, which addresses right-hand skills, includes the second most exercises in *Sound Innovations*. In contrast, content area 2B at the developing level, which addresses rhythmic competencies, includes the second most exercises in *Habits*. Side by side exercise comparisons can be found in Appendix A and Appendix B. Category 1, executive skills

and knowledge, have the highest representation in both books, indicating the greatest utility of reinforcing left- and right-hand techniques. With minimal representation of category 3, artistic skills and knowledge, teachers may need to look elsewhere for materials that support these competencies. This is discussed further in the subsequent chapter.

There were also techniques introduced in both *Sound Innovations* and *Habits* that were not included in the *ASTA String Curriculum*. For example, *Sound Innovations* contained a few exercises that focused on “collé” and “chops” which have no correlating learning target. The same is true for “tremolo” which is part of a few exercises offered in *Habits*. The reasons and implications are explored further in the discussion.

Chapter 5 - Discussion and Conclusion

This chapter will provide a synthesis of the results and address the implications of these findings. This data synthesis is designed for teachers to use as a resource when determining which book or which exercises will best align with their goals and/or objectives for their lessons and curriculum.

The results of the analysis show that many of the exercises in the method books, *Sound Innovations* and *Habits*, align with the developing level of the *ASTA String Curriculum*. The majority of exercises correlate with Category 1 and Category 2. Exercises from *Sound Innovations* overwhelmingly represent skills addressed in Category 1, with 95% of exercises addressing right- and left-hand technical skills. Alternatively, *Habits* more closely adheres to Category 2, with 79% of exercises focusing on rhythmic skills, tonal centers with three sharps/flats, and ensemble skills. Both method books have limited connections with the skills specified in Category 3.

The majority of this alignment occurs with the developing level, rather than the proficient level. I initially thought that the proficient level would have stronger connections with both books, due to misunderstandings about the content areas and learning targets presented at each level. After analyzing the books and working more closely with the *ASTA String Curriculum* the developing level is clearly a much closer fit. The developing level represents an extension of beginning level skills and are intended to be more appropriate for intermediate groups (Benham et al., 2021), which could reasonably occur around the second and third years of instruction. Contrastingly, the *ASTA String Curriculum* states the proficient level includes demonstrating mastery of beginning and developing skills, which may occur at the end of middle school or into high school (Benham et al., 2021). The assertion by McDevitt (2022) that the second level

method book has utility at the high school level does not accurately represent current definitions of the correlating levels included in the method books. My experience and analysis align more with Jeung (1999), who asserts that “the third book of the series is designed... to serve as a reference for a school string orchestra for many years beyond the third year of study” (pp. 12-13). Despite giving suggestions or guidelines in reference to years, Behnam et al. (2021) acknowledges that “there is great diversity and disparity in our professions” (p. 24) due to a variety of factors, and programs and students will all grow and learn at different rates. Ultimately, it will rely on the teacher’s thorough understanding of their program and assessment of materials, and sequencing and timing of using a method book depends wholly on the needs of the program at that time.

Along with understanding the level at which the exercises represent, knowing what alignment there is with specific content areas is a vital part of understanding its’ utility. Both method books show considerable alignment with the *ASTA String Curriculum* regarding executive skills, as each exercise coincides with at least one learning target. There is a very clear focus in both books on right-hand (RH) and left-hand (LH) technical skills. For example, both method books include over 225 unique exercises that are dedicated to Category 1, which contains RH and LH skills. One of the reasons for this could be that traditionally, technique has been the primary focus of many string ensemble classes, which is reflected in these and other method books. As string education focus shifted to include technique and pedagogy, these ideas and skills became “innate parts of method books” (Murphy, 2024, p. 32). Another reason for this could be that those skills are the easiest to represent in a method book format for teachers and students. They also likely have a well-established foundation in earlier method book curricula. These are also the easiest skills for teachers to assess, since RH and LH technical skills can be

assessed with visual or auditory cues, and can receive immediate feedback and corrections when needed. In contrast, assessing more creative and abstract skills such as improvisation, composition, evaluation, or expressivity require much more time, planning, reinforcement, and expertise from the educator, which may contribute to the limited representation in these books. Because these competencies are also less established in the current curriculum and are more subjective, the choice may have been to leave the sequencing and application of those skills to the teacher.

Many learning targets in the *ASTA String Curriculum* regarding musicianship or artistic skills are not addressed directly in these two method books, with only a limited number of exercises offering the potential (with modification) to include musical skill work. Competencies in areas such as aural skills, improvisation, and composition are not covered or are addressed in a limited capacity in either method book, even though that is an equal portion of the *ASTA String Curriculum*. For example, less than 20% of exercises in *Sound Innovations* address Artistic Skills and Knowledge (Category 3) and only 4% of exercises in *Habits* address the same category. Some of the skills presented in the *ASTA String Curriculum* require constant reinforcement, and not something that should necessarily be used in an exercise and then no longer thought about (things like adjusting intonation, balance, etc.). These skills are generally left up to the teachers' discretion to address and strengthen these concepts. As Laux (2022) pointed out, method books are limited in what authors can include, and that naturally things must be cut.

The method books at this level are also traditionally used sparingly compared to the focus on literature (McDevitt, 2022), and I assume they are used as more of a supplement to the teachers' curriculum rather than a sequential method that determines the order of skills taught.

Because ensemble courses at this level typically focus on literature and concert performances, the provided analysis and organization is meant to support the learning of new skills and techniques alongside the literature. Another important aspect to method book selection alongside literature focus, is that “there is not one method book that will fit perfectly into a single situation” (Laux, 2022, para. 3), and by providing this analysis I hope to encourage teachers to explore books that they may not have used in the past to see how they could be utilized.

While every exercise in *Sound Innovations* fits into a learning target of the *ASTA String Curriculum*, there were a limited number of exercises that incorporated techniques beyond those identified in the ASTA learning targets. Specifically, RH techniques that include skills such as “chops,” “collé,” and tremolo were unique to this method. This could be due to limited educational literature available that includes these techniques (“chops” are typically considered an extended technique and have limited utility in repertoire outside folk music). While these skills were not mentioned in the ASTA curriculum, these skills are needed as teachers develop well-rounded string players. For example, tremolos are encountered fairly regularly in many genres of string repertoire. While “collé” itself is not typically used as a standalone skill, the “collé” action translates into many other commonly used bow strokes like spiccato, martelé, legato, and is important for bow control and finger flexibility.

Like many of their predecessors, both books were very upper strings focused. This finding is reinforced by McDevitt (2022) who echoes that “the point of view of the string ‘class’ method books seem to be in favor of the violin” (p.6) even for level two method books. This leads to a higher level of difficulty for the lower strings with little to no introduction of the skill. For example, in *Habits*, basses are required to shift in almost every exercise after exercise number 16, with exercises that include shifts up to seventh position. In contrast, the book offers

very little introduction to the highly complex skill of shifting past fourth position. Additionally, shifting to these higher positions (such as fifth and beyond) is a skill that belongs in the proficient level of the *ASTA String Curriculum*, while the skills addressed for other instruments during the same exercises align with the developing level. This discrepancy can lead to difficulty when identifying the exercises that are chosen to reinforce a particular concept or skill, especially if the level of difficulty is drastically different for individual instrument sections. It could also contribute to the reason level 3 method books are used more inconsistently in programs. For instance, exercise #88 in *Habits* is called “Introducing 2nd Position” and contains shifting from 1st to 2nd position for violins and violas. This same exercise, however, goes up to 3rd position for cello and 5th position for bass. The title of the exercise is misleading for the lower strings and may drastically change the set-up of this exercise as well as its application for the teacher. Appendix A has a detailed layout of each exercise and how it corresponds with the proficient and developing level of the *ASTA String Curriculum*. The sequencing of a teacher’s curricular program will be a significant factor in helping the orchestra director select the appropriate exercise. In addition, due to the variations discussed above, all aspects of the exercise should be considered.

Implications

The implications of these results and discussion are as follows. The comparison of these books to the *ASTA String Curriculum* is a way to broaden the application of these findings to any prescribed curriculum for strings. By using this resource, I hope to also deepen teacher understanding and interpretation of the *ASTA String Curriculum* and how it can be utilized to inform curricular decisions and sequencing for their own classroom.

While I offer my interpretations of the data in this discussion, I recognize that all string programs are different. The inclusion of my full analysis in the appendices is intended to empower teachers to make meaning of the data themselves, and to promote informed decision making of both method book's utility to their own unique program. Appendix A, C, and D show the comparison of specific exercise numbers to their corresponding *ASTA String Curriculum* learning targets in the developing and proficient levels. Appendix A is used for a comparison between the method books at each level, while Appendix C focuses on *Sound Innovations* exercises and Appendix D focuses on *Habits* exercises. Appendix B provides total number of exercises that correspond with the learning targets. All four of these appendices could be used to make a decision between the two books, to identify which resource has the greatest alignment to the needs of the program. Appendix E is information on each exercise included in *Sound Innovations* that highlight the focus and techniques required to play each exercise, any accompanying pedagogical information or other text, and additional observations. Appendix F is the same information for *Habits*. These last two appendices are a great place to find specific exercises that reinforce one or more objectives, as well as give the reader a thorough understanding of what is included in each book.

This research also contributed to the findings that method books are “violin” heavy in the presentation of technique, sequencing, and reinforcement of skills. By highlighting this continued perpetuation of upper-string focused method books, I encourage publishers to implement a more holistic method that levels the playing field for all string orchestra members to find success with new techniques.

Limitations

While the breadth of analysis in these two method books was extensive, this study still includes a number of limitations. First, since only two method books were analyzed and compared to the *ASTA String Curriculum*, many more published method books from the past two decades await this same analysis. Second, since the author was the sole analysis of this data, it is possible that errors were made. For example, my own experience in the classroom may have influenced what I perceive as important and valuable during the selection process. Questions and clarification of skills were discussed with my major professor to solidify confidence in each field, however, the majority of learning target assignments were done alone. Third, many more factors might be considered when assessing a method book to determine if it is appropriate for the class. Finally, while the *ASTA String Curriculum* is a comprehensive and valuable tool for string educators, there are other established curricula that may offer a different perspective of string teaching, and the alignment shown in this study may not transfer in an effective way.

After my analysis, my ideal selection between the two books would be to use both of them. Both books are different in the scope of competencies they include, and for the well-roundedness of my students' education and support of needed skills, both books display merit in necessary areas. If budget dictated that I only use one, due to the breadth of learning targets covered by this one book. By including exercises that address artistic knowledge and skills, it supports the importance of learning more than only executive techniques. Despite this selection, no singular method book is perfect. Laux (2022) points out that many teachers use other books, handouts, and resources, and that sticking to one method book series may not be what is most effective for the class as there is no one method that will fit every situation. As teachers, we should not settle once we have selected a method book, as "conscientious, successful teachers

search for new and better materials” (Tatton, 1994, p. 65), and our classes, students, and materials are always changing.

Conclusion

This study was intended to provide a foundation for analyzing, comparing, and organizing level 3 string orchestra method books. Future studies could include different organizational processes or other curricula to compare to. The application of this study would be interesting to investigate, and developing an appropriate sequence alongside repertoire would also give insight into better utilization of these books and exercises. By identifying that these two books are also very violin focused, this researcher hopes that method book writers and publishers consider the discrepancy of required skills and techniques for each instrument and makes efforts to even out the exercises provided for a more inclusive approach.

Selecting the proper method book is key to the success of the students—it is also unique to each teaching situation. My analysis of these two books is meant to aid teachers in the selection process as well as to increase the utility of these particular method books. In the intermediate level of string education, the method books are meant to serve as a supplementary tool to teach new concepts and reinforce previously learned techniques and skills. By using this analysis as a starting point, teachers can begin compiling exercises and resources that best fit the needs of their students.

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Appendix A - ASTA with SI and Habits

This appendix contains a table of the *ASTA String Curriculum* learning targets, and the list of corresponding exercises from both method books, *Sound Innovations* and *Habits*.

Content Area	Learning Targets - Developing	Developing Sound Innovations Exercises	Developing Habits Exercises
1A) Body Format	2.1 - Unilateral movement (connected to bowing motion; bow and body same direction)	N/A	N/A
	2.2 - Bilateral movement (connected to bowing motion; bow and body opposite directions)	N/A	N/A
	2.3 - Continue Baseline criteria, monitoring and adjusting to physical characteristics of individual students	N/A	1, 2, 3, 4, 16, 17, 18
1B) Left Hand S/K	2.1 - Extensions a. Violin/Viola b. Cello/Bass	*note: all are 2.1b unless otherwise indicated; 42, 43, 45, 47, 50, 54, 56, 76, 85, 88, 103, 106, 109, 112, 115, 117, 118, 120, 121, 123, 124, 126, 127, 128, 29, 130, 131, 132, 134, 135, 136, 138, 139, 147, 149, 150, 151, 154, [160 a], 167, 170 [a], 171-173, 175-178, 180-183, 185 [a], 186-190, 192, 194, 195, 197, 200, 202, 204, 205, 207, 210-214, 235	*note: all are 2.1b unless otherwise indicated; 22-35, 38-50, 52 (a), 53, 55, 61, 62, 66, 67, 70, 72, 73, 74, 75, 78, 79, 82, 84, 88, 89, 90, 91 (a,b), 92, 93, 94, 96, 97, 98, 100 (a optional), 101, 108 (a), 110, 114 (a,b), 115, 116, 119, 121, 123, 124, 126, 129, 130-135, 137-158, 160-164, 166-170, 172, 173, 174 (a,b), 175, 176, 177 (a,b), 178, 179, 180 (a), 181-187, 189-193, 196, 197, 198 (a,b), 201-205, 207-209, 210 (a,b), 211, 218, 222, 224 (a,b)

Content Area	Learning Targets - Developing	Developing Sound Innovations Exercises	Developing Habits Exercises
1B) Left Hand S/K	2.2 - Introduction of positions a. Violin/Viola b. Cello/Bass c. Half Positions	*note: all are 2.2a unless otherwise indicated; 89, 92, 95, 98, 104, 107, 110, 116, 119, 122, 125, 137, 141, 145	*note: the book doesn't "introduce" new positions but rather reviews them through patterns; 49 (c), 50 (c), 59-67, 85?, 88?, 89, 94, 120 (c)
	2.3 - Refinement of shifting a. Violin/Viola b. Cello c. Bass	47 (b), 56 (b), 76 (b), 83-88, 89, 90, 91 (b,c), 92, 93, 94 (b,c), 95, 96, 97 (b,c), 98, 99, 100 (b,c), 101 (b,c), 102 (b,c), 103, 104, 105, 106 (b,c), 107, 108, 109 (b,c), 110, 111, 112 (b,c), 113, 114, 115 (b,c), 116, 117, 118 (b,c), 119, 120, 121 (b,c), 122, 123, 124 (b,c), 125, 126, 127-130 (b,c), 131, 132, 133-136 (b,c), 137, 138-140 (b,c), 141, 142, 143 (b,c), 144 (b,c), 145-151, 153 (b,c), 154 (b,c), 155 (c) [a,b], 156 (a,c), 157 (a,c), 158 (c), 160-162 (a,b), 164 (b), 165-167, 170-172, 175-177, 178 (c), 179 (b), [180 (a)], 185-187, 190-192, 195, 196 (a,c), 197 (a,c), 201 (b), 202 (a), 205-207, 210-212, 214 (b), 228 (b,c), 229 (b,c)[a], 235, 236 (a,b)	N1, 16+ (c), 40+ (b), 51, 52, 56, 57, 58, 63-67 (c,d), 68-88, 89 (c,d), 90, 91, 92, 93, 95, 96, 97, 98, 107 (a,c), 108 (b,c), 109 (a,c), 113, 115, 117, 119, 120, 121, 122 (b,c), 122, 125, 127, 128 (b,c), 130 (b,c), 131, 132 (b,c), 133, 135 (b,c), 137, 139, 143, 144 (b,c), 145, 146 (b,c), 147 (b,c), 149 (b,c), 150 (b,c), 151, 152-154 (b,c), 155, 156 (b,c), 157, 159 (b,c), 161, 163, 165 (a), 167 (a,c), 169, 171 (b,c), 173, 175, 176 (b), 179-180 (b,c), 181, 182-184 (b,c), 185, 187, 188 (b,c), 190 (b,c), 191, 192 (b,c), 193, 194-196 (b,c), 197, 198 (b,c), 199, 200 (b,c), 201 (b,c), 202 (b), 203, 204 (b,c), 205, 206 (b), 207 (b,c), 208 (b,c), 209-211, 215 (c), 219-221 (c), 223 (a,b), 224 (a,b), 225

Content Area	Learning Targets - Developing	Developing Sound Innovations Exercises	Developing Habits Exercises
1B) Left Hand S/K	2.4 - Harmonics	83-88	56
	2.5 - Finger substitutions (vln/vla only)	228, 229	18, 51, 52, 77, 98, 333
	2.6 - Simple double-stops (one open string, one fingered string)	42, 75, 77, 78, 79, 80, 82	4, 12
	2.7 - Chromatic alterations (F-F#)	34, 43, 47, 76, 174, 184, 199, 209, 228, 229, 230	16, 17, 18, 19, 20, 21, 23, 25-31, 35, 37, 38, 39, 40, 41, 50, 51, 52, 55, 64, 67, 68, 70, 71, 92, 94, 95, 101, 103, 160, 161, 163, 166, 167, 169, 172, 173, 175, 178, 179, 181, 184, 185, 187, 190, 191, 193, 196, 198, 199, 202, 203, 205, 208, 209, 211, 215-217, 220-225, 323, 333, 334, 337, 339, 341, 360
	2.8 - Extension of vertical technique (finger weight)	231	N/A
1C) Right Hand S/K	2.1 - Extending the détaché bow stroke	42, 43	1, 2, 3, 7, 9
	2.2 - On-the-string strokes a. Martelé b. Slurred staccato (even rhythms and bow usage) c. Hooked bowings (dotted or uneven rhythms and bow usage) d. Longer slurs (three or more notes) e. Accented Détaché	19-21 (d), 24-25 (d), 28-30 (d), 39 (d), 40 (d), 48 (b), 49 (b,c), 50 (c), 51 (b,c), 52 (b), 53 (d), 54 (d), 57-63 (a), 74 (b,d), 75 (d), 76 (b,d), 130 (c), 132 (d), 133 (b), 139 (b), 158 (d), 163 (d), 168 (d), 173 (d), 188 (b,d), 193 (b), 198 (b), 213 (b), 227 (c), 228 (d), 232-234 (d), 235 (c)	5 (d), 7 (b, c), 9 (a), 11 (c), 14 (d), 15 (c, d), 17 (d), 20 (d), 36 (d), 75 (d), 79 (c,d), 80 (c,d), 83 (c,d), 242 (c), 247 (c), 251 (c), 266 (c), 267 (c), 270 (c), 271 (b,c), 274 (c), 283 (b), 301 (c), 302 (b,c), 303 (c), 305 (c), 307 (b), 308-310 (c), 313 (c), 315 (c), 317 (c), 318 (c), 320 (d), 321 (c), 322 (b), 324 (b,c), 325 (b,c), 327 (b,c), 329 (b), 330 (b), 335 (b), 338 (c), 339 (b), 341 (b), 342 (b), 343-346 (c), 348 (c), 349 (b), 350 (c), 351 (c), 352 (b), 353 (c)

Content Area	Learning Targets - Developing	Developing Sound Innovations Exercises	Developing Habits Exercises
1C) Right Hand S/K	2.3 - Off-the-string strokes a. Brush stroke (beginning spiccato)	71, 72, 73, 133	13, 14, 15
	2.4 - Simple Double Stops	42, 75, 77, 78, 79, 80, 82	4, 12, 225
	2.5 - Extension of technique related to control of tone-production variables (weight, angle, speed, and placement)	1-52'	1, 2, 3, 4, 7, 9, {212-225}
2A) Tonal Aural Skills and Ear Training	2.1 - Students perform, by ear, <i>melodic</i> tonal patterns (patterns and melodies within a one-octave scale) in major and minor tonalities (vocally, pizzicato, and/or arco, neutral syllable, then solfege)	{21}, {242}	N/A
	2.2 - Students manipulate single pitches to adjust intonation and listen for "ringing tones" (resonance, sympathetic vibrations)	N/A	12, 16, 17, 104, 105, 110, 111, 116, 117, 122, 123, 134, 135, 140, 141, 146, 147, 152, 153, 158, 159, 164, 165, 170, 171, 176, 177, 182, 183, 188, 189, 194, 195, 200, 201, 206, 207
	2.3 - Students perform, by ear, primary (tonic, dominant, and subdominant) <i>harmonic</i> tonal patterns (vocally, pizzicato, and/or arco, neutral syllable, then solfege)	N/A	19, 29
	2.4 - Students improvise (vocally, pizzicato, and/or arco) <i>melodic</i> tonal patterns (within an octave)	N/A	N/A
	2.5 - Students improvise (vocally, pizzicato, and/or arco) <i>harmonic</i> tonal patterns (vocally, pizzicato, and/or arco, neutral syllable, then solfege)	N/A	19

Content Area	Learning Targets - Developing	Developing Sound Innovations Exercises	Developing Habits Exercises
2A) Tonal Aural Skills and Ear Training	2.6 - Students alter melodies and harmonies (major to minor and vice versa)	N/A	38, 40, 63
	2.7 - Students use fine tuners to adjust strings to match an external tonal reference	N/A	{Teacher Introduction}
2B) Rhythmic Aural Skills and Ear Training	2.1 - Students will perform rhythm patterns containing subdivisions (16th notes is subdivision; Quarter is macrobeat, eighth is microbeat)	6, 17, 27, 44, 49, 51, 52, 63, 64-70, 74, 75, 227, 232, 233, 235, 237, 240, 242	3, 6, 7, 9, 11, 15, 17, 20, 28, 32, 36, 37, 38, 39, 44, 50, 53, 55, 217, 219, 256-260, 261-264, 265-271, 272, 273, 274, 277, 279, 326-334, 343-349, 351, 355, 236, 357, 358, 359, 360
	2.2 - Students will perform rhythm patterns containing elongations (syncopation and dotted notes, ties)	11, 40, 49, 50, 51, 52, 81, 89, 90, 92, 93, 95, 96, 98, 99, 101, 102, 104, 105, 107, 108, 110, 111, 113, 114, 116, 117, 119, 120, 122, 123, 125, 126, 129, 130, 132, 137, 141, 145, 227, 235, 236, 237-241	7, 8, 11, 24, 27, 79, 80, 83, 214, 216, 217, 219-225, 236-250, 254, 255, 257, 259, 263, 264, 265-274, 275, 276, 278, 284, 285, 292-295, 296-303, 304-310, 311-317, 322, 323, 325, 331, 332, 333, 339, 340, 341, 342, 343-351, 353, 354, 358, 359, 360
	2.3 - Students will perform rhythm patterns containing rests	7, 18, 22, 57, 58, 61, 63, 64-70, 77, 78, 83-88, 131, 133, 134, 235, 237-245	13, 212, 220, 222, 223, 224, 225, 226, 227, 228, 230-235, 236, 249, 253, 255, 256, 257, 259, 260, 264, 268, 280, 281, 282, 284, 285, 286, 287, 288-295, 296, 298, 301, 308, 310, 311, 313, 314, 317, 319, 326, 327, 328, 330, 332
	2.4 - Students will improvise rhythm patterns corresponding to Learning Targets 2.1-2.3	{239}, {240}, {241}	N/A

Content Area	Learning Targets - Developing	Developing Sound Innovations Exercises	Developing Habits Exercises
2C) Creative Musicianship	2.1 - Rhythmic: Students teach each other short original rhythmic phrases through call-and-response	N/A	N/A
	2.2 - Tonal (Melodic and Harmonic): Students use the root, third, and fifth of a chord to solo over student-generated accompaniment	N/A	N/A
	2.3 - Textural: Students translate a visual or experiential narrative into original sounds on their instruments (music as storytelling)	{40}	N/A
	2.4 - Compositional: Students add traditional notation into their original scores	{237}, {238}, {244}, {245}	N/A
	2.5 - Creative Leadership: Students rehearse conducting the group with individually created hand signals	N/A	N/A
2D) Music Literacy	2.1 - Students correctly identify tonality (including key signature) and perform repertoire through three sharps and three flats	76, 128, 129, 130, 185-189, 210-214	24, 25, 31, 36, 37, 42, 43, 44, 45, 46, 55, 77, 78, 79, 80, 81, 82, 93, 94, 96, 97, 100, 122-127, 146-151, 176-181, 200-205, 219, 222
	2.2 - Students correctly identify interval labels (numbers only)	N/A	N/A
	2.3 - Students correctly identify musical forms: <i>Theme and Variations</i> , <i>Rondo</i> , and <i>Minuet and Trio</i>	N/A	N/A

Content Area	Learning Targets - Developing	Developing Sound Innovations Exercises	Developing Habits Exercises
2E) Ensemble Skills	2.1 - Students perform various tempos with a steady pulse	N/A	N/A
	2.2 - Students adjust pitch within the ensemble	{235}, {236}	{16-55}, 63, 104, 105, {212-225}
	2.3 - Students demonstrate understanding of appropriate balance of the melody and accompanying lines	N/A	N/A
	2.4 - Students imitate rhythmic patterns at slow, medium, and fast tempos following a conductor's beat pattern and cues	N/A	N/A
	2.5 - Students match bow usage to section/ensemble	N/A	N/A
3A) Expressive Elements	2.1 - Students evaluate and demonstrate multiple ways of performing a single melody	{157}	N/A
	2.2 - Students apply knowledge of performance practice to selected repertoire	{132}	N/A
	2.3 - Students perform with articulations corresponding to developing-level right-hand technical skills	N/A	N/A
3B) Historical and Cultural Elements	2.1 - Students listen to selected music from diverse cultures and musical eras	N/A	N/A
	2.2 - Students identify, describe, and compare distinguishing characteristics of composers and styles from selected repertoire	{41}	N/A

Content Area	Learning Targets - Developing	Developing Sound Innovations Exercises	Developing Habits Exercises
3B) Historical and Cultural Elements	2.3 - Students perform music from an expanding repertoire of diverse styles	10, 11, 21, 31, 38, 39, 40, 41, 42, 43, 47, 50, 51, 52, 54, 56, 60, 63, 74, 75, 76, 81, 82, 101, 102, 128-136, 139, 140, 143, 154, 235, 236	10, 24, 212-225
3C) Evaluation of Music and Musical Performance	2.1 - Students evaluate individual and group performance using established criteria	{38}, {39}, {81}, {227}, {235}, {243}	N/A
	2.2 - Students describe personal preference in music listening and group performance	N/A	N/A
	2.3 - Students, with teacher assistance, establish criteria for evaluating individual and group performances based on the level of music performed	{76}, {81}	N/A

Content Area	Learning Targets - Proficient	Proficient Sound Innovations Exercises	Proficient Habits Exercises
1A) Body Format	3.1 - Continue previous criteria, monitoring and adjusting to physical characteristics of individual students	N/A	N/A
1B) Left Hand S/K	3.1 - Initial vibrato development	152-154	9, 10, {appendicies}
	3.2 - Advanced positions (fifth and higher)	*note: all are bass V position unless otherwise indicated; 89, 90, 92, 93, 95, 96, 98, 99, 101, 102, 104, 105, 107, 108, 110, 111, 113, 114, 116, 117, 119, 120, 122, 123, 125, 126, 130, 132, 133, 135, 136, 141, 142, 144, 145 (all), 146 (all), 147 (vln/vla), 148 (vln, bass), 149 (vln/vla), 150 (vln/vla, bass), 151 (vln, bass), [160 cello], 162 (cello), 165-167, 172 (vln), 187 (vla, cello), 190, 191 (vln, bass), 192 (vln, bass), [195 cello], 205 bass [cello], 206, 207 bass [cello], [210 vln], 212 (vln)	*note: all are bass V position unless otherwise indicated; 61, 63, 65, 66, 70, 78, 86, 87, 88, 91 (cello optional, bass), 92 (cello optional, bass), 94, 95, 96, 100 (vln/vla optional, cello, bass), 101 (all), 102 (all), 103 (all), 113, 115 (vla, cello, bass), 120, 125 (cello, bass), 127 (vla), 131, 132, 133 (vln, bass), 135, 137 (vln), 139 (vln, bass), 143 (vla, bass), 145 (vla, cello) 150, 151 (vln, bass), 155 (cello, bass), 157 vla, cello), 161 (cello, bass), 163 (vla, cello), 169 (vln, bass), 171, 173, 175 (vla, cello, bass), 185 (vln, bass), 187 (vln, bass), 192, 193 (vln, bass)
	3.3 - Complex double stops (two fingered strings)	234	N/A
	3.4 - Advanced finger patterns - Violin/Viola (ex. Augmented and chromatic patterns)	228, 229	22
	3.5 - Extension of vertical technique	N/A	N/A

Content Area	Learning Targets - Proficient	Proficient Sound Innovations Exercises	Proficient Habits Exercises
1C) Right Hand S/K	3.1 - More advanced détaché bowings: a. Détaché lancé b. Détaché porte c. Portato (louré) d. Rapid détaché e. Tremolo	53-56 (c)	N/A
	3.2 - Off-the-string strokes a. Spiccato	71, 72, 73, 74, 75, 76	13, 14, 15, {appendicies}
	3.3 - Special effect bowings a. Col legno b. Flautando c. Sul ponticello d. Sul tasto	N/A	N/A
	3.4 - Chords	N/A	29
	3.5 - Extension of technique related to control of tone-production variables (weight, angle, speed, and placement)	N/A	1, 2, 3
2A) Tonal Aural Skills and Ear Training	3.1 - Students perform, by ear, melodic tonal patterns (patterns with melodies with chromatic alterations) in major and minor tonalities (vocally, pizzicato, and/or arco, neutral syllable, then solfege)	N/A	N/A
	3.2 - Students perform primary and secondary (ii, vi, vii) tonal patterns (vocally, pizzicato, and/or arco, neutral syllable, then solfege)	N/A	N/A

Content Area	Learning Targets - Proficient	Proficient Sound Innovations Exercises	Proficient Habits Exercises
2A) Tonal Aural Skills and Ear Training	3.3 - Students improvise (vocally, pizzicato, and/or arco, neutral syllable, then solfege) melodies and patterns, using chromatic alterations or simple modulations (ex. Major to relative/parallel minor)	N/A	N/A
	3.4 - students improvise (vocally, pizzicato, and/or arco, neutral syllable, then solfege) simple accompaniments to melodies	N/A	N/A
	3.5 - Students use fine tuners and/or pegs to tune strings, in fifths, to an external tonal reference	N/A	{Teacher Introduction}
2B) Rhythmic Aural Skills and Ear Training	3.1 - Students will perform rhythmic patterns in asymmetrical and unusual meters	239, 244, 245	N/A
	3.2 - students will perform rhythm patterns containing hemiolas	N/A	275-279
	3.3 - Students will perform rhythm patterns containing enrhythmic notation	N/A	N/A
	3.4 - Students will improvise rhythm patterns corresponding to Learning Targets 3.1-3.3	N/A	N/A
2C) Creative Musicianship	3.1 - Rhythmic: Students layer individual rhythmic phrases to create an original group piece	N/A	N/A
	3.2 - Tonal (Melodic and Harmonic): Students create solos using the notes of the scale as stepping-stones between chord tones	N/A	N/A

Content Area	Learning Targets - Proficient	Proficient Sound Innovations Exercises	Proficient Habits Exercises
2C) Creative Musicianship	3.3 - Textural: Students translate a visual or experiential narrative into original sounds on their instruments and add rhythmic components (rhythmic focus)	N/A	N/A
	3.4 - Compositional: Students add a second instrument to their original scores	N/A	N/A
	3.5 - Creative Leadership: Student conductors lead extemporaneous sound stories using nonverbal signals	N/A	N/A
2D) Music Literacy	3.1 - Students correctly identify and perform chords from chord symbols (tonic, dominant, and subdominant)	N/A	N/A
	3.2 - Violists correctly identify and perform the pitches found on the treble-clef staff, for the D and A strings, through third position	N/A	N/A
	3.3 - Cellists correctly identify and perform the pitches found on the tenor-clef staff, for the D and A strings, through fourth position	N/A	N/A
	3.4 - Bassists correctly identify and perform the pitches found on the tenor-clef staff, for the D and G strings	N/A	N/A
	3.5 - Students correctly identify and perform double-flats and double-sharps	N/A	N/A
	3.6 - Students correctly identify tonality (including key signature) and perform repertoire through four sharps and four flats	N/A	32, 33, 35, 47, 48, 49, 50, 55, 128-133, 152-157, 182-187, 206-211

Content Area	Learning Targets - Proficient	Proficient Sound Innovations Exercises	Proficient Habits Exercises
2D) Music Literacy	3.7 - Students correctly identify musical form: Sonata-Allegro	N/A	N/A
2E) Ensemble Skills	3.1 - Students follow section leader	N/A	N/A
	3.2 - Students perform with style, articulation, and pitch including adjusting dynamics according to musical function of their part (i.e. melody, harmony, counterpoint, etc.)	N/A	N/A
	3.3 - Students follow conductor's more complex beat patterns, cues, and expressive gestures	N/A	N/A
3A) Expressive Elements	3.1 - Students perform with an expanded range of dynamics, tempi, and timbre/tone color	N/A	N/A
	3.2 - Students perform with a characteristic tone at all dynamic levels	N/A	N/A
	3.3 - Students apply knowledge of performance practice to selected repertoire	N/A	N/A
	3.4 - Students perform with articulations corresponding to proficient-level right-hand technical skills	N/A	N/A
	3.5 - Students use vibrato, when appropriate, to enhance timbre and tone	N/A	N/A

Content Area	Learning Targets - Proficient	Proficient Sound Innovations Exercises	Proficient Habits Exercises
3B) Historical and Cultural Elements	3.1 - Students listen to selected music from diverse culture and musical eras	N/A	N/A
	3.2 - Students analyze and classify music according to style, composer, and genre	N/A	N/A
	3.3 - Students perform music from a large repertoire of diverse styles	N/A	N/A
3C) Evaluation of Music and Musical Performance	3.1 - Students evaluate individual and group performance using established criteria	N/A	N/A
	3.2 - Students describe personal preference in music listening and group performance	N/A	N/A
	3.3 Students, with teacher assistance, establish criteria for evaluating individual and group performances based on the level of music performed	N/A	N/A
	3.4 - Students compare and contrast performances of various interpretations of the same piece, using appropriate terminology and informed value judgements	{39}	N/A

Appendix B - Learning Targets

This appendix contains a condensed table of the *ASTA String Curriculum* learning targets at the developing and proficient levels, and the number of corresponding exercises from both method books, *Sound Innovations* and *Habits*. The two method books are presented side by side for comparison purposes.

Learning Targets - Developing	SI	Habits	Learning Targets - Proficient	SI	Habits
1A.2.1	0	0	1A.3.1	0	0
1A.2.2	0	0			
1A.2.3	0	7			
1B.2.1	76	141	1B.3.1	3	3
1B.2.2	14	16	1B.3.2 (a-c only)	2	4
1B.2.3 (a-c only)	67	70	1B.3.3	1	0
1B.2.4	6	1	1B.3.4	2	1
1B.2.5	2	6	1B.3.5	0	0
1B.2.6	7	2			
1B.2.7	11	77			
1B.2.8	1	0			
1C.2.1	2	5	1C.3.1	4	0
1C.2.2	49	57	1C.3.2	6	4
1C.2.3	4	3	1C.3.3	0	0
1C.2.4	7	3	1C.3.4	0	1
1C.2.5	53	20	1C.3.5	0	0
2A.2.1	2	0	2A.3.1	0	0
2A.2.2	0	38	2A.3.2	0	0
2A.2.3	0	2	2A.3.3	0	0
2A.2.4	0	0	2A.3.4	0	0
2A.2.5	0	1	2A.3.5	0	1
2A.2.6	0	3			
2A.2.7	0	1			
2B.2.1	24	65	2B.3.1	3	0
2B.2.2	47	103	2B.3.2	0	5
2B.2.3	35	56	2B.3.3	0	0
2B.2.4	3	0	2B.3.4	0	0
2C.2.1	0	0	2C.3.1	0	0
2C.2.2	0	0	2C.3.2	0	0
2C.2.3	1	0	2C.3.3	0	0
2C.2.4	4	0	2C.3.4	0	0
2C.2.5	0	0	2C.3.5	0	0

Learning Targets - Developing	SI	Habits	Learning Targets - Proficient	SI	Habits
2D.2.1	14	48	2D.3.1	0	0
2D.2.2	0	0	2D.3.2	0	0
2D.2.3	0	0	2D.3.3	0	0
			2D.3.4	0	0
			2D.3.5	0	0
			2D.3.6	0	32
			2D.3.7	0	0
2E.2.1	0	0	2E.3.1	0	0
2E.2.2	2	56	2E.3.2	0	0
2E.2.3	0	0	2E.3.3	0	0
2E.2.4	0	0			
2E.2.5	0	0			
3A.2.1	1	0	3A.3.1	0	0
3A.2.2	1	0	3A.3.2	0	0
3A.2.3	0	0	3A.3.3	0	0
			3A.3.4	0	0
			3A.3.5	0	0
3B.2.1	0	0	3B.3.1	0	0
3B.2.2	1	0	3B.3.2	0	0
3B.2.3	40	16	3B.3.3	0	0
3C.2.1	6	0	3C.3.1	0	0
3C.2.2	0	0	3C.3.2	0	0
3C.2.3	2	0	3C.3.3	0	0
			3C.3.4	1	0

Appendix C - ASTA with SI

This appendix contains a table of the *ASTA String Curriculum* learning targets from the developing and proficient levels, and list of corresponding exercises from both method books, *Sound Innovations*. This table includes the developing and proficient levels side-by-side for comparison purposes.

Content Area	Learning Target - Developing	Developing Sound Innovations Exercises	Learning Target - Proficient	Proficient Sound Innovations Exercises
1A) Body Format	2.1 - Unilateral movement (connected to bowing motion; bow and body same direction)	N/A	3.1 - Continue previous criteria, monitoring and adjusting to physical characteristics of individual students	N/A
	2.2 - Bilateral movement (connected to bowing motion; bow and body opposite directions)	N/A		
	2.3 - Continue Baseline criteria, monitoring and adjusting to physical characteristics of individual students	N/A		

Content Area	Learning Target - Developing	Developing Sound Innovations Exercises	Learning Target - Proficient	Proficient Sound Innovations Exercises
1B) Left Hand S/K	2.1 - Extensions a. Violin/Viola b. Cello/Bass	*note: all are 2.1b unless otherwise indicated; 42, 43, 45, 47, 50, 54, 56, 76, 85, 88, 103, 106, 109, 112, 115, 117, 118, 120, 121, 123, 124, 126, 127, 128, 29, 130, 131, 132, 134, 135, 136, 138, 139, 147, 149, 150, 151, 154, [160 a], 167, 170 [a], 171-173, 175-178, 180-183, 185 [a], 186-190, 192, 194, 195, 197, 200, 202, 204, 205, 207, 210-214, 235	3.1 - Initial vibrato development	152-154
	2.2 - Introduction of positions a. Violin/Viola b. Cello/Bass c. Half Positions	*note: all are 2.2a unless otherwise indicated; 89, 92, 95, 98, 104, 107, 110, 116, 119, 122, 125, 137, 141, 145	3.2 - Advanced positions (fifth and higher)	*note: all are bass V position unless otherwise indicated; 89, 90, 92, 93, 95, 96, 98, 99, 101, 102, 104, 105, 107, 108, 110, 111, 113, 114, 116, 117, 119, 120, 122, 123, 125, 126, 130, 132, 133, 135, 136, 141, 142, 144, 145 (all), 146 (all), 147 (vln/vla), 148 (vln, bass), 149 (vln/vla), 150 (vln/vla, bass), 151 (vln, bass), [160 cello], 162 (cello), 165-167, 172 (vln), 187 (vla, cello), 190, 191 (vln, bass), 192 (vln, bass), [195 cello], 205 bass [cello], 206, 207 bass [cello], [210 vln], 212 (vln)

Content Area	Learning Target - Developing	Developing Sound Innovations Exercises	Learning Target - Proficient	Proficient Sound Innovations Exercises
1B) Left Hand S/K	2.3 - Refinement of shifting a. Violin/Viola b. Cello c. Bass	47 (b), 56 (b), 76 (b), 83-88, 89, 90, 91 (b,c), 92, 93, 94 (b,c), 95, 96, 97 (b,c), 98, 99, 100 (b,c), 101 (b,c), 102 (b,c), 103, 104, 105, 106 (b,c), 107, 108, 109 (b,c), 110, 111, 112 (b,c), 113, 114, 115 (b,c), 116, 117, 118 (b,c), 119, 120, 121 (b,c), 122, 123, 124 (b,c), 125, 126, 127-130 (b,c), 131, 132, 133-136 (b,c), 137, 138-140 (b,c), 141, 142, 143 (b,c), 144 (b,c), 145-151, 153 (b,c), 154 (b,c), 155 (c) [a,b], 156 (a,c), 157 (a,c), 158 (c), 160-162 (a,b), 164 (b), 165-167, 170-172, 175-177, 178 (c), 179 (b), [180 (a)], 185-187, 190-192, 195, 196 (a,c), 197 (a,c), 201 (b), 202 (a), 205-207, 210-212, 214 (b), 228 (b,c), 229 (b,c)[a], 235, 236 (a,b)	3.3 - Complex double stops (two fingered strings)	234
	2.4 - Harmonics	83-88	3.4 - Advanced finger patterns - Violin/Viola (ex. Augmented and chromatic patterns)	228, 229
	2.5 - Finger substitutions (vln/vla only)	228, 229	3.5 - Extension of vertical technique	N/A
	2.6 - Simple double-stops (one open string, one fingered string)	42, 75, 77, 78, 79, 80, 82		
	2.7 - Chromatic alterations (F-F#)	34, 43, 47, 76, 174, 184, 199, 209, 228, 229, 230		

Content Area	Learning Target - Developing	Developing Sound Innovations Exercises	Learning Target - Proficient	Proficient Sound Innovations Exercises
1B) Left Hand S/K	2.8 - Extension of vertical technique (finger weight)	231		
1C) Right Hand S/K	2.1 - Extending the détaché bow stroke	42, 43	3.1 - More advanced détaché bowings: a. Détaché lancé b. Détaché porte c. Portato (louré) d. Rapid détaché e. Tremolo	53-56 (c)
	2.2 - On-the-string strokes a. Martelé b. Slurred staccato (even rhythms and bow usage) c. Hooked bowings (dotted or uneven rhythms and bow usage) d. Longer slurs (three or more notes) e. Accented Détaché	19-21 (d), 24-25 (d), 28-30 (d), 39 (d), 40 (d), 48 (b), 49 (b,c), 50 (c), 51 (b,c), 52 (b), 53 (d), 54 (d), 57-63 (a), 74 (b,d), 75 (d), 76 (b,d), 130 (c), 132 (d), 133 (b), 139 (b), 158 (d), 163 (d), 168 (d), 173 (d), 188 (b,d), 193 (b), 198 (b), 213 (b), 227 (c), 228 (d), 232-234 (d), 235 (c)	3.2 - Off-the-string strokes a. Spiccato	71, 72, 73, 74, 75, 76
	2.3 - Off-the-string strokes a. Brush stroke (beginning spiccato)	71, 72, 73, 133	3.3 - Special effect bowings a. Col legno b. Flautando c. Sul ponticello d. Sul tasto	N/A
	2.4 - Simple Double Stops	42, 75, 77, 78, 79, 80, 82	3.4 - Chords	N/A
	2.5 - Extension of technique related to control of tone-production variables (weight, angle, speed, and placement)	1-52'	3.5 - Extension of technique related to control of tone-production variables (weight, angle, speed, and placement)	N/A

Content Area	Learning Target - Developing	Developing Sound Innovations Exercises	Learning Target - Proficient	Proficient Sound Innovations Exercises
2A) Tonal Aural Skills and Ear Training	2.1 - Students perform, by ear, <i>melodic</i> tonal patterns (patterns and melodies within a one-octave scale) in major and minor tonalities (vocally, pizzicato, and/or arco, neutral syllable, then solfege)	{21}, {242}	3.1 - Students perform, by ear, melodic tonal patterns (patterns with melodies with chromatic alterations) in major and minor tonalities (vocally, pizzicato, and/or arco, neutral syllable, then solfege)	N/A
	2.2 - Students manipulate single pitches to adjust intonation and listen for "ringing tones" (resonance, sympathetic vibrations)	N/A	3.2 - Students perform primary and secondary (ii, vi, vii) tonal patterns (vocally, pizzicato, and/or arco, neutral syllable, then solfege)	N/A
	2.3 - Students perform, by ear, primary (tonic, dominant, and subdominant) <i>harmonic</i> tonal patterns (vocally, pizzicato, and/or arco, neutral syllable, then solfege)	N/A	3.3 - Students improvise (vocally, pizzicato, and/or arco, neutral syllable, then solfege) melodies and patterns, using chromatic alterations or simple modulations (ex. Major to relative/parallel minor)	N/A
	2.4 - Students improvise (vocally, pizzicato, and/or arco) <i>melodic</i> tonal patterns (within an octave)	N/A	3.4 - students improvise (vocally, pizzicato, and/or arco, neutral syllable, then solfege) simple accompaniments to melodies	N/A
	2.5 - Students improvise (vocally, pizzicato, and/or arco) <i>harmonic</i> tonal patterns (vocally, pizzicato, and/or arco, neutral syllable, then solfege)	N/A	3.5 - Students use fine tuners and/or pegs to tune strings, in fifths, to an external tonal reference	N/A

Content Area	Learning Target - Developing	Developing Sound Innovations Exercises	Learning Target - Proficient	Proficient Sound Innovations Exercises
2A) Tonal Aural Skills and Ear Training	2.6 - Students alter melodies and harmonies (major to minor and vice versa)	N/A		
	2.7 - Students use fine tuners to adjust strings to match an external tonal reference	N/A		
2B) Rhythmic Aural Skills and Ear Training	2.1 - Students will perform rhythm patterns containing subdivisions (16th notes is subdivision; Quarter is macrobeat, eighth is microbeat)	6, 17, 27, 44, 49, 51, 52, 63, 64-70, 74, 75, 227, 232, 233, 235, 237, 240, 242	3.1 - Students will perform rhythmic patterns in asymmetrical and unusual meters	239, 244, 245
	2.2 - Students will perform rhythm patterns containing elongations (syncopation and dotted notes, ties)	11, 40, 49, 50, 51, 52, 81, 89, 90, 92, 93, 95, 96, 98, 99, 101, 102, 104, 105, 107, 108, 110, 111, 113, 114, 116, 117, 119, 120, 122, 123, 125, 126, 129, 130, 132, 137, 141, 145, 227, 235, 236, 237-241	3.2 - students will perform rhythm patterns containing hemiolas	N/A
	2.3 - Students will perform rhythm patterns containing rests	7, 18, 22, 57, 58, 61, 63, 64-70, 77, 78, 83-88, 131, 133, 134, 235, 237-245	3.3 - Students will perform rhythm patterns containing enrhythmic notation	N/A
	2.4 - Students will improvise rhythm patterns corresponding to Learning Targets 2.1-2.3	{239}, {240}, {241}	3.4 - Students will improvise rhythm patterns corresponding to Learning Targets 3.1-3.3	N/A

Content Area	Learning Target - Developing	Developing Sound Innovations Exercises	Learning Target - Proficient	Proficient Sound Innovations Exercises
2C) Creative Musicianship	2.1 - Rhythmic: Students teach each other short original rhythmic phrases through call-and-response	N/A	3.1 - Rhythmic: Students layer individual rhythmic phrases to create an original group piece	N/A
	2.2 - Tonal (Melodic and Harmonic): Students use the root, third, and fifth of a chord to solo over student-generated accompaniment	N/A	3.2 - Tonal (Melodic and Harmonic): Students create solos using the notes of the scale as stepping-stones between chord tones	N/A
	2.3 - Textural: Students translate a visual or experiential narrative into original sounds on their instruments (music as storytelling)	{40}	3.3 - Textural: Students translate a visual or experiential narrative into original sounds on their instruments and add rhythmic components (rhythmic focus)	N/A
	2.4 - Compositional: Students add traditional notation into their original scores	{237}, {238}, {244}, {245}	3.4 - Compositional: Students add a second instrument to their original scores	N/A
	2.5 - Creative Leadership: Students rehearse conducting the group with individually created hand signals	N/A	3.5 - Creative Leadership: Student conductors lead extemporaneous sound stories using nonverbal signals	N/A
2D) Music Literacy	2.1 - Students correctly identify tonality (including key signature) and perform repertoire through three sharps and three flats	76, 128, 129, 130, 185-189, 210-214	3.1 - Students correctly identify and perform chords from chord symbols (tonic, dominant, and subdominant)	N/A
	2.2 - Students correctly identify interval labels (numbers only)	N/A	3.2 - Violists correctly identify and perform the pitches found on the treble-clef staff, for the D and A strings, through third position	N/A

Content Area	Learning Target - Developing	Developing Sound Innovations Exercises	Learning Target - Proficient	Proficient Sound Innovations Exercises
2D) Music Literacy	2.3 - Students correctly identify musical forms: <i>Theme and Variations</i> , <i>Rondo</i> , and <i>Minuet and Trio</i>	N/A	3.3 - Cellists correctly identify and perform the pitches found on the tenor-clef staff, for the D and A strings, through fourth position	N/A
			3.4 - Bassists correctly identify and perform the pitches found on the tenor-clef staff, for the D and G strings	N/A
			3.5 - Students correctly identify and perform double-flats and double-sharps	N/A
			3.6 - Students correctly identify tonality (including key signature) and perform repertoire through four sharps and four flats	N/A
			3.7 - Students correctly identify musical form: Sonata-Allegro	N/A
2E) Ensemble Skills	2.1 - Students perform various tempos with a steady pulse	N/A	3.1 - Students follow section leader	N/A
	2.2 - Students adjust pitch within the ensemble	{235}, {236}	3.2 - Students perform with style, articulation, and pitch including adjusting dynamics according to musical function of their part (i.e. melody, harmony, counterpoint, etc.)	N/A

Content Area	Learning Target - Developing	Developing Sound Innovations Exercises	Learning Target - Proficient	Proficient Sound Innovations Exercises
2E) Ensemble Skills	2.3 - Students demonstrate understanding of appropriate balance of the melody and accompanying lines	N/A	3.3 - Students follow conductor's more complex beat patterns, cues, and expressive gestures	N/A
	2.4 - Students imitate rhythmic patterns at slow, medium, and fast tempos following a conductor's beat pattern and cues	N/A		
	2.5 - Students match bow usage to section/ensemble	N/A		
3A) Expressive Elements	2.1 - Students evaluate and demonstrate multiple ways of performing a single melody	{157}	3.1 - Students perform with an expanded range of dynamics, tempi, and timbre/tone color	N/A
	2.2 - Students apply knowledge of performance practice to selected repertoire	{132}	3.2 - Students perform with a characteristic tone at all dynamic levels	N/A
	2.3 - Students perform with articulations corresponding to developing-level right-hand technical skills	N/A	3.3 - Students apply knowledge of performance practice to selected repertoire	N/A
			3.4 - Students perform with articulations corresponding to proficient-level right-hand technical skills	N/A
			3.5 - Students use vibrato, when appropriate, to enhance timbre and tone	N/A

Content Area	Learning Target - Developing	Developing Sound Innovations Exercises	Learning Target - Proficient	Proficient Sound Innovations Exercises
3B) Historical and Cultural Elements	2.1 - Students listen to selected music from diverse cultures and musical eras	N/A	3.1 - Students listen to selected music from diverse culture and musical eras	N/A
	2.2 - Students identify, describe, and compare distinguishing characteristics of composers and styles from selected repertoire	{41}	3.2 - Students analyze and classify music according to style, composer, and genre	N/A
	2.3 - Students perform music from an expanding repertoire of diverse styles	10, 11, 21, 31, 38, 39, 40, 41, 42, 43, 47, 50, 51, 52, 54, 56, 60, 63, 74, 75, 76, 81, 82, 101, 102, 128-136, 139, 140, 143, 154, 235, 236	3.3 - Students perform music from a large repertoire of diverse styles	N/A
3C) Evaluation of Music and Musical Performance	2.1 - Students evaluate individual and group performance using established criteria	{38}, {39}, {81}, {227}, {235}, {243}	3.1 - Students evaluate individual and group performance using established criteria	N/A
	2.2 - Students describe personal preference in music listening and group performance	N/A	3.2 - Students describe personal preference in music listening and group performance	N/A
	2.3 - Students, with teacher assistance, establish criteria for evaluating individual and group performances based on the level of music performed	{76}, {81}	3.3 Students, with teacher assistance, establish criteria for evaluating individual and group performances based on the level of music performed	N/A
			3.4 - Students compare and contrast performances of various interpretations of the same piece, using appropriate terminology and informed value judgements	{39}

Appendix D - ASTA with Habits

This appendix contains a table of the *ASTA String Curriculum* learning targets from the developing and proficient levels, and list of corresponding exercises from both method books, *Habits*. This table includes the developing and proficient levels side-by-side for comparison purposes.

Content Area	Learning Target - Developing	Developing Habits Exercises	Learning Target - Proficient	Proficient Habits Exercises
1A) Body Format	2.1 - Unilateral movement (connected to bowing motion; bow and body same direction)	N/A	3.1 - Continue previous criteria, monitoring and adjusting to physical characteristics of individual students	N/A
	2.2 - Bilateral movement (connected to bowing motion; bow and body opposite directions)	N/A		
	2.3 - Continue Baseline criteria, monitoring and adjusting to physical characteristics of individual students	1, 2, 3, 4, 16, 17, 18		

Content Area	Learning Target - Developing	Developing Habits Exercises	Learning Target - Proficient	Proficient Habits Exercises
1B) Left Hand S/K	2.1 - Extensions a. Violin/Viola b. Cello/Bass	*note: all are 2.1b unless otherwise indicated; 22-35, 38-50, 52 (a), 53, 55, 61, 62, 66, 67, 70, 72, 73, 74, 75, 78, 79, 82, 84, 88, 89, 90, 91 (a,b), 92, 93, 94, 96-98, 100 (a optional), 101, 108 (a), 110, 114 (a,b), 115, 116, 119, 121, 123, 124, 126, 129, 130-135, 137-158, 160-164, 166-170, 172, 173, 174 (a,b), 175, 176, 177 (a,b), 178, 179, 180 (a), 181-187, 189-193, 196, 197, 198 (a,b), 201-205, 207-209, 210 (a,b), 211, 218, 222, 224 (a,b)	3.1 - Initial vibrato development	9, 10, {appendicies}
	2.2 - Introduction of positions a. Violin/Viola b. Cello/Bass c. Half Positions	*note: the book doesn't "introduce" new positions but rather reviews them through patterns; 49 (c), 50 (c), 59-67, 85?, 88?, 89, 94, 120 (c)	3.2 - Advanced positions (fifth and higher)	*note: all are bass V position unless otherwise indicated; 61, 63, 65, 66, 70, 78, 86, 87, 88, 91 (cello optional, bass), 92 (cello optional, bass), 94, 95, 96, 100 (vln/vla optional, cello, bass), 101 (all), 102 (all), 103 (all), 113, 115 (vla, cello, bass), 120, 125 (cello, bass), 127 (vla), 131, 132, 133 (vln, bass), 135, 137 (vln), 139 (vln, bass), 143 (vla, bass), 145 (vla, cello) 150, 151 (vln, bass), 155 (cello, bass), 157 vla, cello), 161 (cello, bass), 163 (vla, cello), 169 (vln, bass), 171, 173, 175 (vla, cello, bass), 185 (vln, bass), 187 (vln, bass), 192, 193 (vln, bass)

Content Area	Learning Target - Developing	Developing Habits Exercises	Learning Target - Proficient	Proficient Habits Exercises
1B) Left Hand S/K	2.3 - Refinement of shifting a. Violin/Viola b. Cello c. Bass	N1, 16+ (c), 40+ (b), 51, 52, 56, 57, 58, 63-67 (c,d), 68-88, 89 (c,d), 90, 91, 92, 93, 95, 96, 97, 98, 107 (a,c), 108 (b,c), 109 (a,c), 113, 115, 117, 119, 120, 121, 122 (b,c), 122, 125, 127, 128 (b,c), 130 (b,c), 131, 132 (b,c), 133, 135 (b,c), 137, 139, 143, 144 (b,c), 145, 146 (b,c), 147 (b,c), 149 (b,c), 150 (b,c), 151, 152-154 (b,c), 155, 156 (b,c), 157, 159 (b,c), 161, 163, 165 (a), 167 (a,c), 169, 171 (b,c), 173, 175, 176 (b), 179-180 (b,c), 181, 182-184 (b,c), 185, 187, 188 (b,c), 190 (b,c), 191, 192 (b,c), 193, 194-196 (b,c), 197, 198 (b,c), 199, 200 (b,c), 201 (b,c), 202 (b), 203, 204 (b,c), 205, 206 (b), 207 (b,c), 208 (b,c), 209-211, 215 (c), 219-221 (c), 223 (a,b), 224 (a,b), 225	3.3 - Complex double stops (two fingered strings)	N/A
	2.4 - Harmonics	56	3.4 - Advanced finger patterns - Violin/Viola (ex. Augmented and chromatic patterns)	22
	2.5 - Finger substitutions (vln/vla only)	18, 51, 52, 77, 98, 333	3.5 - Extension of vertical technique	N/A
	2.6 - Simple double-stops (one open string, one fingered string)	4, 12		

Content Area	Learning Target - Developing	Developing Habits Exercises	Learning Target - Proficient	Proficient Habits Exercises
1B) Left Hand S/K	2.7 - Chromatic alterations (F-F#)	16, 17, 18, 19, 20, 21, 23, 25-31, 35, 37, 38, 39, 40, 41, 50, 51, 52, 55, 64, 67, 68, 70, 71, 92, 94, 95, 101, 103, 160, 161, 163, 166, 167, 169, 172, 173, 175, 178, 179, 181, 184, 185, 187, 190, 191, 193, 196, 198, 199, 202, 203, 205, 208, 209, 211, 215-217, 220-225, 323, 333, 334, 337, 339, 341, 360		
	2.8 - Extension of vertical technique (finger weight)	N/A		
1C) Right Hand S/K	2.1 - Extending the détaché bow stroke	1, 2, 3, 7, 9	3.1 - More advanced détaché bowings: a. Détaché lancé b. Détaché porte c. Portato (louré) d. Rapid détaché e. Tremolo	N/A
	2.2 - On-the-string strokes a. Martelé b. Slurred staccato (even rhythms and bow usage) c. Hooked bowings (dotted or uneven rhythms and bow usage) d. Longer slurs (three or more notes) e. Accented Détaché	5 (d), 7 (b, c), 9 (a), 11 (c), 14 (d), 15 (c, d), 17 (d), 20 (d), 36 (d), 75 (d), 79 (c,d), 80 (c,d), 83 (c,d), 242 (c), 247 (c), 251 (c), 266 (c), 267 (c), 270 (c), 271 (b,c), 274 (c), 283 (b), 301 (c), 302 (b,c), 303 (c), 305 (c), 307 (b), 308-310 (c), 313 (c), 315 (c), 317 (c), 318 (c), 320 (d), 321 (c), 322 (b), 324 (b,c), 325 (b,c), 327 (b,c), 329 (b), 330 (b), 335 (b), 338 (c), 339 (b), 341 (b), 342 (b), 343-346 (c), 348 (c), 349 (b), 350 (c), 351 (c), 352 (b), 353 (c)	3.2 - Off-the-string strokes a. Spiccato	13, 14, 15, {appendices}

Content Area	Learning Target - Developing	Developing Habits Exercises	Learning Target - Proficient	Proficient Habits Exercises
1C) Right Hand S/K	2.3 - Off-the-string strokes a. Brush stroke (beginning spiccato)	13, 14, 15	3.3 - Special effect bowings a. Col legno b. Flautando c. Sul ponticello d. Sul tasto	N/A
	2.4 - Simple Double Stops	4, 12, 225	3.4 - Chords	29
	2.5 - Extension of technique related to control of tone-production variables (weight, angle, speed, and placement)	1, 2, 3, 4, 7, 9, {212-225}	3.5 - Extension of technique related to control of tone-production variables (weight, angle, speed, and placement)	1, 2, 3
2A) Tonal Aural Skills and Ear Training	2.1 - Students perform, by ear, <i>melodic</i> tonal patterns (patterns and melodies within a one-octave scale) in major and minor tonalities (vocally, pizzicato, and/or arco, neutral syllable, then solfege)	N/A	3.1 - Students perform, by ear, melodic tonal patterns (patterns with melodies with chromatic alterations) in major and minor tonalities (vocally, pizzicato, and/or arco, neutral syllable, then solfege)	N/A
	2.2 - Students manipulate single pitches to adjust intonation and listen for "ringing tones" (resonance, sympathetic vibrations)	12?, 16?, 17?, 104, 105, 110, 111, 116, 117, 122, 123, 134, 135, 140, 141, 146, 147, 152, 153, 158, 159, 164, 165, 170, 171, 176, 177, 182, 183, 188, 189, 194, 195, 200, 201, 206, 207	3.2 - Students perform primary and secondary (ii, vi, vii) tonal patterns (vocally, pizzicato, and/or arco, neutral syllable, then solfege)	N/A
	2.3 - Students perform, by ear, primary (tonic, dominant, and subdominant) <i>harmonic</i> tonal patterns (vocally, pizzicato, and/or arco, neutral syllable, then solfege)	19, 29	3.3 - Students improvise (vocally, pizzicato, and/or arco, neutral syllable, then solfege) melodies and patterns, using chromatic alterations or simple modulations (ex. Major to relative/parallel minor)	N/A

Content Area	Learning Target - Developing	Developing Habits Exercises	Learning Target - Proficient	Proficient Habits Exercises
2A) Tonal Aural Skills and Ear Training	2.4 - Students improvise (vocally, pizzicato, and/or arco) <i>melodic</i> tonal patterns (within an octave)	N/A	3.4 - students improvise (vocally, pizzicato, and/or arco, neutral syllable, then solfege) simple accompaniments to melodies	N/A
	2.5 - Students improvise (vocally, pizzicato, and/or arco) <i>harmonic</i> tonal patterns (vocally, pizzicato, and/or arco, neutral syllable, then solfege)	19	3.5 - Students use fine tuners and/or pegs to tune strings, in fifths, to an external tonal reference	{Teacher Introduction}
	2.6 - Students alter melodies and harmonies (major to minor and vice versa)	38, 40, 63		
	2.7 - Students use fine tuners to adjust strings to match an external tonal reference	{Teacher Introduction}		
2B) Rhythmic Aural Skills and Ear Training	2.1 - Students will perform rhythm patterns containing subdivisions (16th notes is subdivision; Quarter is macrobeat, eighth is microbeat)	3, 6, 7, 9, 11, 15, 17, 20, 28, 32, 36, 37, 38, 39, 44, 50, 53, 55, 217, 219, 256-260, 261-264, 265-271, 272, 273, 274, 277, 279, 326-334, 343-349, 351, 355, 236, 357, 358, 359, 360	3.1 - Students will perform rhythmic patterns in asymmetrical and unusual meters	N/A
	2.2 - Students will perform rhythm patterns containing elongations (syncopation and dotted notes, ties)	7, 8, 11, 24, 27, 79, 80, 83, 214, 216, 217, 219-225, 236-250, 255, 257, 259, 263, 264, 265-274, 275, 276, 278, 284, 285, 292-295, 296-303, 304-310, 311-317, 322, 323, 325, 331, 332, 333, 339, 340, 341, 342, 343-351, 353, 354, 358, 359, 360	3.2 - students will perform rhythm patterns containing hemiolas	275-279

Content Area	Learning Target - Developing	Developing Habits Exercises	Learning Target - Proficient	Proficient Habits Exercises
2B) Rhythmic Aural Skills and Ear Training	2.3 - Students will perform rhythm patterns containing rests	13, 212, 220, 222, 223, 224, 225, 226, 227, 228, 230-235, 236, 249, 253, 255, 256, 257, 259, 260, 264, 268, 280, 281, 282, 284, 285, 286, 287, 288-295, 296, 298, 301, 308, 310, 311, 313, 314, 317, 319, 326, 327, 328, 330, 332	3.3 - Students will perform rhythm patterns containing enrhythmic notation	N/A
	2.4 - Students will improvise rhythm patterns corresponding to Learning Targets 2.1-2.3	N/A	3.4 - Students will improvise rhythm patterns corresponding to Learning Targets 3.1-3.3	N/A
2C) Creative Musicianship	2.1 - Rhythmic: Students teach each other short original rhythmic phrases through call-and-response	N/A	3.1 - Rhythmic: Students layer individual rhythmic phrases to create an original group piece	N/A
	2.2 - Tonal (Melodic and Harmonic): Students use the root, third, and fifth of a chord to solo over student-generated accompaniment	N/A	3.2 - Tonal (Melodic and Harmonic): Students create solos using the notes of the scale as stepping-stones between chord tones	N/A
	2.3 - Textural: Students translate a visual or experiential narrative into original sounds on their instruments (music as storytelling)	N/A	3.3 - Textural: Students translate a visual or experiential narrative into original sounds on their instruments and add rhythmic components (rhythmic focus)	N/A
	2.4 - Compositional: Students add traditional notation into their original scores	N/A	3.4 - Compositional: Students add a second instrument to their original scores	N/A

Content Area	Learning Target - Developing	Developing Habits Exercises	Learning Target - Proficient	Proficient Habits Exercises
2C) Creative Musicianship	2.5 - Creative Leadership: Students rehearse conducting the group with individually created hand signals	N/A	3.5 - Creative Leadership: Student conductors lead extemporaneous sound stories using nonverbal signals	N/A
2D) Music Literacy	2.1 - Students correctly identify tonality (including key signature) and perform repertoire through three sharps and three flats	24, 25, 31, 36, 37, 42, 43, 44, 45, 46, 55, 77, 78, 79, 80, 81, 82, 93, 94, 96, 97, 100, 122-127, 146-151, 176-181, 200-205, 219, 222	3.1 - Students correctly identify and perform chords from chord symbols (tonic, dominant, and subdominant)	N/A
	2.2 - Students correctly identify interval labels (numbers only)	N/A	3.2 - Violists correctly identify and perform the pitches found on the treble-clef staff, for the D and A strings, through third position	N/A
	2.3 - Students correctly identify musical forms: <i>Theme and Variations</i> , <i>Rondo</i> , and <i>Minuet and Trio</i>	N/A	3.3 - Cellists correctly identify and perform the pitches found on the tenor-clef staff, for the D and A strings, through fourth position	N/A
			3.4 - Bassists correctly identify and perform the pitches found on the tenor-clef staff, for the D and G strings	N/A
			3.5 - Students correctly identify and perform double-flats and double-sharps	N/A

Content Area	Learning Target - Developing	Developing Habits Exercises	Learning Target - Proficient	Proficient Habits Exercises
2D) Music Literacy			3.6 - Students correctly identify tonality (including key signature) and perform repertoire through four sharps and four flats	32, 33, 35, 47, 48, 49, 50, 55, 128-133, 152-157, 182-187, 206-211
			3.7 - Students correctly identify musical form: Sonata-Allegro	N/A
2E) Ensemble Skills	2.1 - Students perform various tempos with a steady pulse	N/A	3.1 - Students follow section leader	N/A
	2.2 - Students adjust pitch within the ensemble	{16-55}, 63, 104, 105, {212-225}	3.2 - Students perform with style, articulation, and pitch including adjusting dynamics according to musical function of their part (i.e. melody, harmony, counterpoint, etc.)	N/A
	2.3 - Students demonstrate understanding of appropriate balance of the melody and accompanying lines	N/A	3.3 - Students follow conductor's more complex beat patterns, cues, and expressive gestures	N/A
	2.4 - Students imitate rhythmic patterns at slow, medium, and fast tempos following a conductor's beat pattern and cues	N/A		
	2.5 - Students match bow usage to section/ensemble	N/A		

Content Area	Learning Target - Developing	Developing Habits Exercises	Learning Target - Proficient	Proficient Habits Exercises
3A) Expressive Elements	2.1 - Students evaluate and demonstrate multiple ways of performing a single melody	N/A	3.1 - Students perform with an expanded range of dynamics, tempi, and timbre/tone color	N/A
	2.2 - Students apply knowledge of performance practice to selected repertoire	N/A	3.2 - Students perform with a characteristic tone at all dynamic levels	N/A
	2.3 - Students perform with articulations corresponding to developing-level right-hand technical skills	N/A	3.3 - Students apply knowledge of performance practice to selected repertoire	N/A
			3.4 - Students perform with articulations corresponding to proficient-level right-hand technical skills	N/A
			3.5 - Students use vibrato, when appropriate, to enhance timbre and tone	N/A
3B) Historical and Cultural Elements	2.1 - Students listen to selected music from diverse cultures and musical eras	N/A	3.1 - Students listen to selected music from diverse culture and musical eras	N/A
	2.2 - Students identify, describe, and compare distinguishing characteristics of composers and styles from selected repertoire	N/A	3.2 - Students analyze and classify music according to style, composer, and genre	N/A
	2.3 - Students perform music from an expanding repertoire of diverse styles	10, 24, 212-225	3.3 - Students perform music from a large repertoire of diverse styles	N/A

Content Area	Learning Target - Developing	Developing Habits Exercises	Learning Target - Proficient	Proficient Habits Exercises
3C) Evaluation of Music and Musical Performance	2.1 - Students evaluate individual and group performance using established criteria	N/A	3.1 - Students evaluate individual and group performance using established criteria	N/A
	2.2 - Students describe personal preference in music listening and group performance	N/A	3.2 - Students describe personal preference in music listening and group performance	N/A
	2.3 - Students, with teacher assistance, establish criteria for evaluating individual and group performances based on the level of music performed	N/A	3.3 Students, with teacher assistance, establish criteria for evaluating individual and group performances based on the level of music performed	N/A
			3.4 - Students compare and contrast performances of various interpretations of the same piece, using appropriate terminology and informed value judgements	N/A

Appendix E - SI Exercise Breakdown

This appendix contains a table that describes each exercise from *Sound Innovations* in detail.

Number	Title	Composer	Focus	Sound Advice: Remind students to...	Challenges	Additional Notes
	Level One: Sound Tone					
	Bowing Lanes					
1	Playing in the Mezzo Forte Lane			...keep the bow parallel to the bridge		
2	Playing in the Forte Lane			...start the bow near the frog		
3	Playing in the Mezzo Piano Lane			...tilt the bow toward the scroll		
4	Playing in the Piano Lane			"		Typo
5	Playing in the Fortissimo Lane			...use flat bow hair		
6	Playing in the Pianissimo Lane		Sixteenth Notes	...tilt the bow toward the scroll	Challenge: Perform Playing in the Fortissimo Lane and Playing in the Pianissimo Lane as one Piece	
7	Row your Bow		Parallel Bow Angle, rests	...start with the bow parallel to the bridge		
8	Changing Bowing Lanes			...move the bow slowly	Challenge: Go back and play the exercise starting up bow	

Number	Title	Composer	Focus	Sound Advice: Remind students to...	Challenges	Additional Notes
9	Changing Bowing Lanes in One Bow			...start with the bow parallel to the bridge	Challenge: Go back and play the exercise starting up bow	
10	Theme from Symphony No. 104 Mvt. 4	Joseph Haydn	Changing from mf to f lane	...change bowing lanes when changing dynamics		
11	Cossack Lullaby	Russian Folk Song	Changing from p to pp lane, dotted quarter notes	"		
	Bow Weight					
12	Medium-Heavy Bow Weight			...keep the right-hand fingers relaxed while adding or removing arm weight	Challenge: Go back and play the exercise in a two-part round (group A and B) as your teacher directs	
13	Heavy Bow Weight			"		
14	Very-Heavy Bow Weight			"		
15	Medium-Light Bow Weight			"		
16	Light Bow Weight			"		
17	Very-Light Bow Weight		Sixteenth Notes	"		
18	Dynamic Contrast		Changing from heavy to light bow weight, rests	"		
19	Pulsing Tone		Changing from medium-heavy to light bow weight in mf bowing lane, six note slurs	"		
20	Deep Tone, Pulse Tone		Pulsing the bow, three note slurs	"		

Number	Title	Composer	Focus	Sound Advice: Remind students to...	Challenges	Additional Notes
21	French Folk Song	Traditional	Three Pulses per measure, six note slurs	"	Challenge: Play the rest of the song by ear	
	Bow Speed					
22	Medium-Fast Bow Speed		rests	...keep the bow parallel to the bridge while adjusting the tone variables		
23	Medium-Slow Bow Speed			"		
24	Slow Bow Speed		four note slurs	"		
25	Very-Slow Bow Speed		eight note slurs	"	Challenge: Play this piece slurring four measures in one bow	
26	Fast Bow Speed			"		
27	Very-Fast Bow Speed		sixteenth notes	"		
28	Changing from Slow to Fast Bow Speed		three note slurs	...use a whole bow		
29	Changing from Fast to Slow Bow Speed		three note slurs	"		
30	Save and Spend the Bow		four note slurs	"		
31	Sakura	Japanese Folk Song		...divide the bow into three equal sections		
	Bow Division					
32	Playing in the Upper Third			...divide the bow into three equal sections		
33	Playing in the Middle Third			"		
34	Playing in the Lower Third		chromatic alteration	"		

Number	Title	Composer	Focus	Sound Advice: Remind students to...	Challenges	Additional Notes
35	Moving from Frog to Tip			"		This exercise uses the term "parts" instead of "sections" in the teachers manual
36	Moving from Tip to Frog			"		
37	Playing with a Whole Bow			"	Challenge: Go back and play the entire page as one piece	
	Tone Repertoire					
38	The Great Gate of Kiev	Modest Mussorgsky		...move the bow slowly (save the bow) on whole notes	Describe the [tone] adjustments you made. Listen to a recording of a professional performance of this piece and analyze how the players control the tone variables when they play	

Number	Title	Composer	Focus	Sound Advice: Remind students to...	Challenges	Additional Notes
39	Theme from Symphony No. 1	Johannes Brahms	three note slur	...save the bow on the dotted half note	Describe the [tone] adjustments you made. Listen to a professional recording of this piece and compare your performance to it	
40	Arirang	Korean Folk Song	six note slur, dotted quarter notes	...adjust the right-arm level when crossing strings	How does adjusting tone variables compare to the use of color in the visual arts?	
41	Cripple Creek	American Fiddle Tune	Eighth notes all except last note half	"	Describe the [tone] adjustments you made. Challenge 1: Listen to each piece of music above and decide the style and which historical period it's from. Challenge 2: Use the tone variables you have learned in Level 1 to play songs from various cultures and time periods that you learned in SOUND INNOVATIONS BOOK 1 and 2	

Number	Title	Composer	Focus	Sound Advice: Remind students to...	Challenges	Additional Notes
	Level 2: Sound Bowings					
	Detache					
42	Pavanne	French Renaissance Dance	backwards extension cello, simple double stop	...use a flexible right-hand wrist when changing bow directions		
43	Credo from Mass No. 2, Excerpt 1	Franz Schubert	G ⁴ to G# accidental, forward extension cello	...look through the piece for any written accidentals before playing		
	Tremolo					
44	Playing Tremolo		Tremolo on open A	...keep the right-hand wrist relaxed as they play tremolo		
45	Theme of the Bad Guys		Tremolo plus staccato, Bb backward extension cello	...play tremolo in the upper half of the bow		
46	Learning to Play Staccato		Detache to staccato open D string	...release the staccato notes without crunching the sound		
47	Credo from Mass No. 2, Excerpt 2	Franz Schubert	forward extension cello, lots of chromatic alteration (C#, E#, G#, A#), optional cello shifting	...stay in the lower third of the bow		
	Staccato Hooks					
48	Learning to Play Staccato Hooks		slurred staccato on open D	...feel the pulse of the right-hand thumb when playing hooked staccatos		
49	Playing Staccato Hooks		hooked and slurred staccato altered rhythms on open D	"		
50	Pack She Back to She Ma	Barbados Folk Song	hooked bow, cello extensions	...stop the bow on the hooked down bows	Challenge: Circle the staccato hooked notes	

Number	Title	Composer	Focus	Sound Advice: Remind students to...	Challenges	Additional Notes
51	Cabbage and Beets	German Folk Song	hooked and slurred staccato	...stop the bow and release the sound between each series of staccato hooked bows		
52	Non Piu Andrai	Wolfgang Amadeus Mozart	hooked bow	"		
	Legato Hooks					
53	Learning to Play Legato Hooks		portato on middle C, two and four note pulses	...play the legato hooked bowings with smooth pulsation		
54	Allegro Con Brio from Symphony No. 1	Ludwig van Beethoven	backward extension cello, two and four note portato	"		
55	Playing Legato Hooked Eighth Notes		two note portato on G above middle C, dotted rhythm	"		
56	Theme from Keyboard Concerto	Johann Sebastian Bach	backward extension cello, shifting cello 2nd position	"		
	Martele					
57	Learning to Play Martele		c major arpeggio, rests	...listen for the click at the beginning of each note		
58	Playing Martele on Two Quarter Notes		c major scale, rests	Have students play the exercise pizzicato, then arco and compare the ring		
59	Playing Martele on the C Scale		c major scale	...pinch into the string before moving the bow	Challenge: play this exercise using different dynamic levels and sections of the bow	

Number	Title	Composer	Focus	Sound Advice: Remind students to...	Challenges	Additional Notes
60	British Grenadiers	English Folk Song	martele in context	"		
61	Learning to Play with a Fast Martele		martele eighth notes with rests	...release the bow weight as soon as they move the bow		
62	Playing with a Fast Martele on Eighth Notes		martele eighth notes no rests	"		
63	Gloria	Antonio Vivaldi	stylistic martele, rests, sixteenth notes	...play the legato hooked bowings with a smooth pulsation	Listen to a professional recording of this piece and develop a musical checklist to compare and evaluate your performance	
	Colle			nothing in either developing, proficient, or advanced about colle		
64	Colle Exercise		colle motion with rests	...release the bow into the air		
65	Playing Repeated Colle Bow Strokes		colle motion with rests	"		
66	Changing Ends of the Bow		colle motion with rests	"		
67	Changing Ends of the Bow on the D Scale		colle motion with rests	"		

Number	Title	Composer	Focus	Sound Advice: Remind students to...	Challenges	Additional Notes
68	Playing the D Scale using Colle		colle motion with rests	...keep the right-hand fingers active	Challenge: reverse the bowings starting up bow at the frog and down bow at the tip	
69	Learning to Play Crawl Colle		colle by dividing the bow into 8ths	...divide the bow into eight equal parts		
70	Scale Crawl using Colle		colle by dividing the bow into 8ths	"		
	Spiccato					
71	Taking Off		brush stroke to spiccato	...play at the balance point of the bow		
72	Landing		brush stroke to spiccato	"		
73	Alternating On and Off the String		tenuto to spiccato	"		
74	Farandole	Georges Bizet	spiccato, four sixteenth note slurs and slurred staccato	...play near the frog		
75	Contradanse	Antonio Salieri	four sixteenth notes slurs, open and simple double stops, spiccato	...play at the balance point of the bow		
76	The Magic Flute	Wolfgang Amadeus Mozart	three flats, four sixteenth note slurs, slurred staccato, spiccato, Bb to B $\sharp$, cello shift to 2nd with extensions,	...play in the middle section of the bow		
	Chop			nothing in either developing, proficient, or advanced about chops		
77	Learning to Chop		simple double stop?, rests	...play near the frog		basses don't get doubles in this section

Number	Title	Composer	Focus	Sound Advice: Remind students to...	Challenges	Additional Notes
78	Learning to Chop and Dampen		simple double stops, rests	"		
79	Chopping and Playing		simple double stops,	"		
80	Learning to Change Pitches while Chopping		simple double stops	"		
81	Mari's Wedding Melody	Irish Fiddle Tune	dotted quarter	...play in the lower half of the bow	Take turns performing the piece in small and large ensembles with your classmates. Take turns evaluating the performances using criteria you develop with your teacher	
82	Mari's Wedding Chop Accompaniment	Irish Fiddle Tune	simple double stops	...play near the frog	"	
	Level 3: Sound Shifting					
	Natural Harmonics					
83	Finding the D Harmonic			...touch the string lightly when playing a harmonic		
84	Playing the D Harmonic			"		
85	Playing the A Harmonic		cello extensions	"		
86	Playing the G Harmonic			"		

Number	Title	Composer	Focus	Sound Advice: Remind students to...	Challenges	Additional Notes
87	Playing the C Harmonic			"		
88	Playing the E Harmonic		cello extensions	"		
	Full Page Fingering Chart					
	Playing in 3rd Position: Using Pattern 1					
89	Finding 3rd Position on the D String using Pattern 1		1st to 3rd vln/vla, 1st-4th cello, 1st-5th bass, dotted quarter	...release the left-hand thumb when shifting to a new position		
90	Pattern 1 on the D String in 3rd Position		1st to 3rd vln/vla, 1st-4th cello, 1st-5th bass, dotted quarter	...follow all fingerings		
91	Pattern 1 on the D String in 3rd Position Again		3rd position vln/vla, 3rd to 4th cello, 2nd to 3rd bass	"		
92	Finding 3rd Position on the A String using Pattern 1		1st to 3rd vln/vla, 1st-4th cello, 1st-5th bass, dotted quarter	...release the left-hand thumb when shifting to a new position		
93	Pattern 1 on the A String in 3rd Position		1st to 3rd vln/vla, 1st-4th cello, 1st-5th bass, dotted quarter	...follow all fingerings		
94	Pattern 1 on the A String in 3rd Position Again		3rd position vln/vla, 3rd to 4th cello, 2nd to 3rd bass	"		
95	Finding 3rd Position on the G String using Pattern 1		1st to 3rd vln/vla, 1st-4th cello, 1st-5th bass, dotted quarter	...release the left-hand thumb when shifting to a new position		
96	Pattern 1 on the G String in 3rd Position		1st to 3rd vln/vla, 1st-4th cello, 1st-5th bass, dotted quarter	...follow all fingerings		
97	Pattern 1 on the G String in 3rd Position Again		3rd position vln/vla, 3rd to 4th cello, 2nd to 3rd bass	"		

Number	Title	Composer	Focus	Sound Advice: Remind students to...	Challenges	Additional Notes
98	Finding 3rd Position on the E and C Strings using Pattern 1		1st to 3rd vln/vla, 1st-4th cello, 1st-5th bass, dotted quarter	...release the left-hand thumb when shifting to a new position		
99	Pattern 1 on the E and C Strings in 3rd Position		1st to 3rd vln/vla, 1st-4th cello, 1st-5th bass, dotted quarter	...follow all fingerings		
100	Pattern 1 on the E and C Strings in 3rd Position Again		3rd position vln/vla, 3rd to 4th cello, 2nd to 3rd bass	"		
101	Las Mananitas	Mexican Birthday Song	dotted quarter, 3rd position vln/vla, 3rd to 4th cello, 1st-5th bass	...keep the left hand relaxed	Perform this piece for your friends and family using good left and right hand technique	
102	Chester	William Billings	dotted quarter, 3rd position vln/vla, 1st to 3rd cello, backwards extension cello, 1st to 5th bass	"	Challenge: Take turns performing Chester for your classmates. While listening, practice good concert etiquette	
	Shifting from 1st to 3rd Position					
103	Shifting from 1st to 3rd Position		1st to 3rd vln/vla, 1st-4th cello with extensions, 1st-3rd bass	...follow all fingerings	Guide/Transport Finger	
	Playing in 3rd Position: Using Pattern 2					

Number	Title	Composer	Focus	Sound Advice: Remind students to...	Challenges	Additional Notes
104	Finding 3rd Position on the D String using Pattern 2		1st to 3rd vln/vla, 1st-4th cello, 1st-5th bass, dotted quarter	...release the left-hand thumb when shifting to a new position		*this pattern uses Ab and Bb which would indicate a 3b key/3b pattern, however it does not use Eb
105	Pattern 2 on the D String in 3rd Position		1st to 3rd vln/vla, 1st-4th cello, 1st-5th bass, dotted quarter	...follow all fingerings		
106	Pattern 2 on the D String in 3rd Position Again		3rd position vln/vla, 3rd to 4th cello with extension, 2nd to 3rd bass	"		
107	Finding 3rd Position on the A String using Pattern 2		1st to 3rd vln/vla, 1st-4th cello, 1st-5th bass, dotted quarter	...release the left-hand thumb when shifting to a new position		
108	Pattern 2 on the A String in 3rd Position		1st to 3rd vln/vla, 1st-4th cello, 1st-5th bass, dotted quarter	...follow all fingerings		
109	Pattern 2 on the A String in 3rd Position Again		3rd position vln/vla, 3rd to 4th cello with extension, 2nd to 3rd bass	"		
110	Finding 3rd Position on the G string using Pattern 2		1st to 3rd vln/vla, 1st-4th cello, 1st-5th bass, dotted quarter	...release the left-hand thumb when shifting to a new position		*pattern includes Db
111	Pattern 2 on the G String in 3rd Position		1st to 3rd vln/vla, 1st-4th cello, 1st-5th bass, dotted quarter	...follow all fingerings		
112	Pattern 2 on the G String in 3rd Position Again		3rd position vln/vla, 3rd to 4th cello with extension, 2nd to 3rd bass	"		

Number	Title	Composer	Focus	Sound Advice: Remind students to...	Challenges	Additional Notes
113	Finding 3rd Position on the E and C Strings using Pattern 2		1st to 3rd vln/vla, 1st-4th cello, 1st-5th bass, dotted quarter	...release the left-hand thumb when shifting to a new position		*pattern includes F# and Bb in same line for vln/bass, includes Gb for vla/cello
114	Pattern 2 on the E and C String in 3rd Position		1st to 3rd vln/vla, 1st-4th cello, 1st-5th bass, dotted quarter	...follow all fingerings		
115	Pattern 2 on the E and C String in 3rd Position Again		3rd position vln/vla, 3rd to 4th cello with extension, 2nd to 3rd bass	"		
	Playing in 3rd Position: Using Pattern 3					
116	Finding 3rd Position on the D String using Pattern 3		1st to 3rd vln/vla, 1st-4th cello, 1st-5th bass, dotted quarter	...release the left-hand thumb when shifting to a new position		
117	Pattern 3 on the D String in 3rd Position		1st to 3rd vln/vla, 1st-4th cello with extension, 1st-5th bass, dotted quarter	...follow all fingerings		
118	Pattern 3 on the D String in 3rd Position Again		3rd position vln/vla, 3rd to 4th cello with extension, 2nd to 3rd bass	"		
119	Finding 3rd Position on the A String using Pattern 3		1st to 3rd vln/vla, 1st-4th cello, 1st-5th bass, dotted quarter	...release the left-hand thumb when shifting to a new position		
120	Pattern 3 on the A String in 3rd Position		1st to 3rd vln/vla, 1st-4th cello with extension, 1st-5th bass, dotted quarter	...follow all fingerings		

Number	Title	Composer	Focus	Sound Advice: Remind students to...	Challenges	Additional Notes
121	Pattern 3 on the A String in 3rd Position Again		3rd position vln/vla, 3rd to 4th cello with extension, 2nd to 3rd bass	"		
122	Finding 3rd Position on the G String using Pattern 3		1st to 3rd vln/vla, 1st-4th cello, 1st-5th bass, dotted quarter	...release the left-hand thumb when shifting to a new position		
123	Pattern 3 on the G String in 3rd Position		1st to 3rd vln/vla, 1st-4th cello with extension, 1st-5th bass, dotted quarter	...follow all fingerings		
124	Pattern 3 on the G String in 3rd Position Again		3rd position vln/vla, 3rd to 4th cello with extension, 2nd to 3rd bass	"		
125	Finding 3rd Position on the E and C Strings using Pattern 3		1st to 3rd vln/vla, 1st-4th cello, 1st-5th bass, dotted quarter	...release the left-hand thumb when shifting to a new position		
126	Pattern 3 on the E and C Strings in 3rd Position		1st to 3rd vln/vla, 1st-4th cello with extension, 1st-5th bass, dotted quarter	...follow all fingerings		
127	Pattern 3 on the E and C Strings in 3rd Position Again		3rd position vln/vla, 3rd to 4th cello with extension, 2nd to 3rd bass	"		
	Playing in 3rd Position: Using Pattern 2					
128	Theme from Violin Concerto	Ludwig van Beethoven	three flats, 3rd position vln/vla, 1st-4th cello with extensions, 1st-3rd bass	...release the left-hand thumb when shifting to a new position		
129	March from Judas MacCabeus	George Frideric Handel	three flats, 3rd position vln/vla, 1st-4th cello with extensions, 1st-3rd bass, dotted quarter	...follow all fingerings		

Number	Title	Composer	Focus	Sound Advice: Remind students to...	Challenges	Additional Notes
130	Aura Lee	George R. Poulton	three flats, 3rd position vln/vla, 2nd-4th cello with extensions, 3rd-5th bass, dotted quarter with hooked bow	"	Challenge: Listen to a recording of this song and identify the number of sections. After playing the piece, circle the sections that are alike	
	Shifting from 1st to 3rd Position					
131	Long, Long Ago	Thomas Haynes Bayly	1st-3rd vln/vla, 1st-4th cello with extensions, 1st-4th bass,	"	Challenge: Play Long, Long Ago from memory	
132	Scottish Air	Traditional	1st to 3rd vln/vla, 1st-4th cello with extensions, 1st-5th bass, three note slurs, dotted quarter,	"	Challenge: Use all the sound variables from Level 1 to play Scottish Air expressively	
	Playing in 3rd Position: Using Pattern 3					
133	Theme from Serenade for Strings	Pyotr Ilyich Tchaikovsky	3rd position vln/vla, 1st-4th cello, 1st-5th bass, slurred staccato	"		
134	Theme from Symphony No. 9	Antonin Dvorak	3rd position vln/vla, 3rd position cello with extensions, 3rd-4th bass, dotted quarter with hooked bow	"		
135	Theme from Rosamunde	Franz Schubert	3rd position vln/vla, 3rd-4th cello with extensions, 3rd-5th bass	"		

Number	Title	Composer	Focus	Sound Advice: Remind students to...	Challenges	Additional Notes
136	Alleluia	Wolfgang Amadeus Mozart	3rd position vln/vla, 1st-4th cello with extensions, 3rd-5th bass, dotted quarter	"		
	Playing in 2nd Position: Using Pattern 3					
137	Finding 2nd Position on the D String using Pattern 3		1st to 2nd vln/vla, 1st-3rd cello, 1st-4th bass, dotted quarter note	...release the left-hand thumb when shifting to a new position		
138	More Playing in 2nd Position		2nd position vln/vla, 2nd-3rd cello with extensions, 1st-2nd bass	...follow all fingerings		
139	Mattachins (Sword Dance)	Renaissance Dance	2nd position vln/vla, 2nd-3rd cello with extensions, 1st-2nd bass, slurred staccato	"		
140	Etude	Charles de Beriot	2nd position vln/vla, 1st to 2nd cello/bass	"		
	Playing in 4th Position: Using Pattern 1					
141	Finding 4th Position on the D String using Pattern {No.} 1		1st-4th vln/vla/cello, 1st-6th bass, dotted quarter note	...release the left-hand thumb when shifting to a new position		*Note - Book now adds "No." inbetween the pattern and number
142	Learning to Play in 4th Position		1st to 4th vln/vla, 2nd to 4th cello, 3rd-6th bass	...follow all fingerings		
143	Perpetual Motion in 4th Position	Traditional	4th position vln/vla	"	Challenge: Write in the remaining fingerings	
144	Playing in 4th Position		4th position vln/vla, 1st to 4th cello, 1st-6th bass	"		

Number	Title	Composer	Focus	Sound Advice: Remind students to...	Challenges	Additional Notes
	Playing in 5th Position: Using Pattern 3					
145	Finding 5th Position on the D String using Pattern {No.} 3		1st-5th all, dotted quarter note	...release the left-hand thumb when shifting to a new position		
146	5th Position on the D String		1st-5th all	...follow all fingerings		
147	5th Position on the A String		1st-5th vln/vla, 1st-3rd cello with extensions, 1st-4th bass	"		
148	5th Position on the Violin E String		1st-5th vln, 1st-2nd vla, 1st-4th cello, 1st-6th bass	"		
149	5th Position Workout		3rd to 5th vln/vla, 1st-4th cello with extensions, 1st-3rd bass	"		
	Shifting from 3rd to 5th Position					
150	Shifting from 3rd to 5th Position on the A String		3rd-5th vln/vla, 1st-3rd cello with extensions, 1st-5th bass	"		
151	Shifting from 3rd to 5th Position on the Violin E String		3rd-5th vln, 1st-3rd vla, 1st-3rd cello with extensions, 1st-6th bass	"		
	Vibrato					
152	A Complete Vibrato Motion		3rd position vln/vla/cello, 4th position bass, vibrato pulses at different beats, four and six note slurs?	...keep the left hand relaxed		
153	The G Major Scale Starting and Stopping Vibrato		3rd position vln/vla, 1st to 4th cello, 1st to 2nd bass	"		

Number	Title	Composer	Focus	Sound Advice: Remind students to...	Challenges	Additional Notes
154	Chester with Vibrato	William Billings	dotted quarter, 3rd position vln/vla, 1st to 3rd cello, backwards extension cello, 1st to 5th bass	"		
	Level 4: Sound Scales, Arpeggios, Chorales & Rhythms					
	C Major					
155	C Major Scale		1st-2nd bass, (optional 1st to 3rd vln/vla, 1st to 4th cello)	...follow all fingerings		
156	C Major Arpeggio		1st to 2nd vln/bass	"		
157	C Major Scale in Thirds		1st to 3rd vln, 1st to 2nd bass	"		
158	C Major Bowing Variations		1st to 2nd bass, four note slurs	...follow the bowings		
159	C Major Scale Accompaniments		Chord balance, melody vs. harmony	...balance the chords		Could be used to teach chord progressions
	A Natural Minor					
160	A Natural Minor Scale		1st to 4th vla/cello (optional 1st to 3rd vln/vla with extension, 1st-5th cello)	...follow all fingerings		
161	A Natural Minor Arpeggio		1st to 4th vla/cello	"		
162	A Natural Minor Scale in Thirds		1st to 4th vla, 1st-5th cello	"		
163	A Natural Minor Bowing Variations		four note slurs	...follow the bowings		

Number	Title	Composer	Focus	Sound Advice: Remind students to...	Challenges	Additional Notes
164	A Natural Minor Scale Accompaniments		1st to 2nd cello	...balance the chords		
	G Major					
165	G Major Scale		1st to 3rd vla, 1st to 4th cello, 1st-5th bass (optional 1st to 3rd vln)	...follow all fingerings		
166	G Major Arpeggio		1st to 3rd vla, 1st to 4th cello, 1st-5th bass	"		
167	G Major Scale in Thirds		1st to 3rd vla, 1st-4th cello with extensions, 1st-5th bass	"		
168	G Major Bowing Variations		three note slurs	...follow the bowings		
169	G Major Scale Accompaniments			...balance the chords		
	E Natural Minor					
170	E Natural Minor Scale		1st to 4th vln, 1st-3rd cello with extensions, 1st-4th bass, (optional 1st to 3rd vln with extension, optional 1st to 4th vla)	...follow all fingerings		
171	E Natural Minor Arpeggio		1st to 4th vln, 1st-3rd cello with extensions, 1st-4th bass	"		
172	E Natural Minor Scale in Thirds		1st-5th vln, 1st to 2nd cello with extensions, 1st-4th bass	"		
173	E Natural Minor Bowing Variations		cello extensions, three note slurs	...follow the bowings		
174	E Natural Minor Scale Accompaniments		d# in vln	...balance the chords		

Number	Title	Composer	Focus	Sound Advice: Remind students to...	Challenges	Additional Notes
	D Major					
175	D Major Scale		1st to 3rd vln, cello extensions, 1st to 3rd bass (optional 1st to 4th vla, 1st to 4th extended cello)	...follow all fingerings		
176	D Major Arpeggio		1st to 3rd vln, cello extensions, 1st to 3rd bass	"		
177	D Major Scale in Thirds		1st to 3rd vln, cello extensions, 1st to 3rd bass	"		
178	D Major Bowing Variations		cello extensions, 1st to 3rd bass	...follow the bowings		
179	D Major Scale Accompaniments		1st to 2nd cello	...balance the chords		
	B Natural Minor					
180	B Natural Minor Scale		cello extensions (optional 1st to 3rd vln/vla)	...follow all fingerings		
181	B Natural Minor Arpeggio		cello extensions	"		
182	B Natural Minor Scale in Thirds		cello extensions	"		Un-necessary shift marked in violin part (indicated down shift when no prior shift indicated)
183	B Natural Minor Bowing Variations		cello extensions	...follow the bowings		
184	B Natural Minor Scale Accompaniments		low 1 vln, chromatic alteration A# to Anat	...balance the chords		

Number	Title	Composer	Focus	Sound Advice: Remind students to...	Challenges	Additional Notes
	A Major		three sharps			
185	A Major Scale		1st to 4th vla, 1st extended to 4th harmonic cello, 1/2 to 1st bass (optional 1st to 3rd extended vln/vla)	...follow all fingerings		
186	A Major Arpeggio		1st to 4th vla, 1st extended to 4th harmonic cello	"		
187	A Major Scale in Thirds		1st-5th vla, 1st extended-5th cello, 1st-3rd bass	"		
188	A Major Bowing Variations		four note slurs, slurred staccato, cello extensions	...follow the bowings		
189	A Major Scale Accompaniments		cello extensions	...balance the chords		
	F Major					
190	F Major Scale		1st-5th vln, 1st to 3rd vla, 1st extended to 3rd cello, 1st-5th bass (optional 2nd to 5th vln, 2nd vla, 1st-4th cello)	...follow all fingerings		
191	F Major Arpeggio		2nd to 5th vln, 1st to 2nd vla, 1st to 4th cello, 1/2-5th bass	"		
192	F Major Scale in Thirds		1st-5th vln, 1st to 3rd vla, 1st extended to 3rd cello, 1st-5th bass	"		
193	F Major Bowing Variations		slurred staccato	...follow the bowings		
194	F Major Scale Accompaniments		cello extensions	...balance the chords		
	D Natural Minor					
195	D Natural Minor Scale		1st to 3rd vln, cello extension, 1/2-3rd bass (optional 1st to 4th vla, 1st-5th cello)	...follow all fingerings		
196	D Natural Minor Arpeggio		1st to 3rd vln, 1/2 to 3rd bass	"		

Number	Title	Composer	Focus	Sound Advice: Remind students to...	Challenges	Additional Notes
197	D Natural Minor Scale in Thirds		1st to 3rd vln, cello extension, 1/2-3rd bass	"		
198	D Natural Minor Bowing Variations		slurred staccato	...follow the bowings		
199	D Natural Minor Scale Accompaniments		chromatic alteration (C# to Cnat)	...balance the chords		
	Bb Major					
200	Bb Major Scale		cello extension, 1/2 bass (optional 1st to 3rd vln/vla, 1st to 3rd cello)	...follow all fingerings		
201	Bb Major Arpeggio		1st to 4th cello, 1/2 bass	"		
202	Bb Major Scale in Thirds		1st to 3rd vln, cello extensions, 1/2 bass	"		
203	Bb Major Bowing Variations		staccato	...follow the bowings		
204	Bb Major Scale Accompaniments		cello extension	...balance the chords		
	G Natural Minor					
205	G Natural Minor Scale		1st to 3rd vla, 1st extended to 4th cello, 1/2-5th bass (optional 1st to 3rd vln, 1st-5th cello)	...follow all fingerings		mismarked fingering in cello part (c., first note marked as 3rd finger, should be 2nd)
206	G Natural Minor Arpeggio		1st to 3rd vla, 1st-4th cello, 1/2-5th bass	"		
207	G Natural Minor Scale in Thirds		1st to 3rd vla, 1st extended to 4th cello, 1/2-5th bass (optional 1st to 3rd vln, 1st-5th cello)	"		

Number	Title	Composer	Focus	Sound Advice: Remind students to...	Challenges	Additional Notes
208	G Natural Minor Bowing Variations		stacatto	...follow the bowings		
209	G Natural Minor Scale Accompaniments		chromatic alteration (F# to Fnat)	...balance the chords		
	Eb Major		three flats			
210	Eb Major Scale		1st to 4th vln, 1st extended-3rd cello, 1/2-3rd bass (optional 1st-5th vln, 1st to 3rd vla, 1st-4th cello)	...follow all fingerings		
211	Eb Major Arpeggio		1st to 4th vln, 1st extended to 3rd cello, 1/2 to 3rd bass	"		
212	Eb Major Scale in Thirds		1st-5th vln, 1st extended-3rd cello, 1/2-3rd bass	"		
213	Eb Major Bowing Variations		slurred staccato, cello extensions	...follow the bowings		
214	Eb Major Scale Accompaniments		1st extended to 3rd cello	...balance the chords		
	Major Scales		NO FINGERINGS PROVIDED HERE			
215	C Major Scale			Ask students to choose one of the fingerings they have learned for this scale		
216	G Major Scale			"		
217	D Major Scale			"		
218	A Major Scale			"		
219	F Major Scale			"		
220	Bb Major Scale			"		

Number	Title	Composer	Focus	Sound Advice: Remind students to...	Challenges	Additional Notes
221	Eb Major Scale			"		
	Minor Scales		NO FINGEREINGS PROVIDED HERE			
222	A Natural Minor Scale			"		
223	E Natural Minor Scale			"		
224	B Natural Minor Scale			"		
225	D Natural Minor Scale			"		
226	G Natural Minor Scale			"		
227	Sight-Read It		sixteenth notes, dotted eighth-sixteenth pattern, hooked bow	...scan ahead when sight-reading	INCLUDES SIGHT-READING CHECKLIST. Evaluate your performance and decide how to improve it.	
	Finger Action					
228	Chromatic Movement		four note slurs, chromatic, 1st to 2nd cello, 1/2 to 1st bass	...keep the left-hand fingers curved		
229	Chromatic Scale		chromatic, 1st -3rd cello, 1/2-3rd bass (optional 1st to 2nd vln/vla)	"		
230	Horizontal Movement		chromatic alterations, string crossings for RH and LH	"		
231	Velocity Exercise		trills for LH accuracy and spring motion	"		

Number	Title	Composer	Focus	Sound Advice: Remind students to...	Challenges	Additional Notes
232	Trill Motion		four+ note slurs, sixteenth notes, trills between two notes with increased velocity	"		
233	Trill Exercise		four+ note slurs, sixteenth notes, trills in "application"	"		
234	Independent Finger Movement		complex double stops vln/vla, four note slurs	"		
	Chorales					
235	Choral No. 1, Christus, Der ist mein Leben	Johann Sebastian Bach	quarter rest, dotted quarter eighth hooked bow (vln), sixteenth notes (vln), dotted eighth sixteenth (vla), fermata, 1st to 3rd vla, 1st extended to 3rd cello, 1st-6th bass	Have students take turns performing the chorale in small groups while the rest of the class evaluates the performance	Listen to all parts and adjust your intonation to the other players	
236	Choral No. 2, Rhosymedre	Jonathan David Edwards	dotted half notes, 1st to 3rd vla, 1st-4th cello, fermata	Have students take turns performing the chorale while the rest of the class practices good audience behavior	Listen to all parts and adjust your intonation to the other players	No fingerings provided
	Rhythms		Each exercise includes a type of rest			
237	4/4'		sixteenth notes, dotted quarter		Challenge: compose, notate, and perform your own rhythm patterns in this meter	

Number	Title	Composer	Focus	Sound Advice: Remind students to...	Challenges	Additional Notes
238	3/4'		syncopation		Challenge: compose a rhythmic accompaniment to this exercise. Create an arrangement by assigning instruments to play either the exercise or accompaniment, then play in a three-part round and assign instruments to each part	
239	5/4'		compound meter, dotted half, dotted quarter		Challenge: Improvise your own rhythm patterns in this meter	
240	2/4'		sixteenth notes, dotted eighth		Challenge: Improvise your own rhythm patterns in this meter	
241	2/2'		dotted half		Challenge: Improvise your own rhythm patterns in this meter	

Number	Title	Composer	Focus	Sound Advice: Remind students to...	Challenges	Additional Notes
242	6/8'		sixteenth notes, dotted quarter (in triple meter though)		Challenge: Play by ear an eight bar phrase of 6/8 rhythms from any 6/8 piece you know. Play by ear an eight bar phrase from different genres of music in 6/8 time	
243	9/8'		dotted quarter and dotted half (in triple meter)		Take turns playing the 9/8 rhythms for your stand partner and then evaluate the quality and effectiveness of your performances	
244	5/8'		compound meter		Challenge: Write and perform your own rhythm patterns in this meter	
245	7/8'		compound meter, dotted quarter		Challenge: Write and perform your own rhythm patterns in this meter	

Appendix F - Habits Exercise Breakdown

This appendix contains a table that describes each exercise from *Sound Innovations* in detail.

Number	Title	Composer	Focus	Teacher Tips	Additional Notes
	I. Tone and Articulation				
1	Even Tone - Frog to Tip		RH - PAWS out of time		
2	Even Bow Distribution		RH - PAWS in time		
3	Dynamics and Steady Tempo		RH - Dynamic changes with steady tempo		
4	Grab and Release		Intro to Colle Action, Grabing the string and pulling "spinning" tone	Mentions "spinning tone"	
5	String Crossings		String Crossing with different bowing patterns, can add dynamics		
6	String Crossing Etude		Includes String Crossing Variations, uses LH		

Number	Title	Composer	Focus	Teacher Tips	Additional Notes
N1			Introduction and Theme Exercise; 1st to 2nd cello, 1st-4th bass	Select one of the variations with a rhythm or bowing that the students need to learn or review. Establish a tempo, possibly from a concert piece with the rhythms the students are playing. Play the introduction modeling one of the rhythms or articulations from the variations below. Students play the Theme immediately after the teacher, demonstrating the rhythm or articulations just modeled by the teacher or student leader. Practice with and without the classroom metronome	
7	Basic Bow Strokes		Detache bow stroke with different subdivisions of 4/4 time		
8	Syncopated Patterns		Syncopation in 4/4		
9	Full Bow Strokes		Includes Vibrato however does not instruct at all how or give any introduction		
10	Loch Lomond	[Traditional]	Includes Vibrato however does not instruct at all how or give any introduction, focus on legato style and full bows	Use legato, connected bow changes with full tone and vibrato	
11	Triple Patterns		Sixteenth note patterns in 12/8 time		
12	Double Stops		Simple Double stops with one stopped string, extension of "spinning" tone		
13	Spiccato Exercises		Extension of spiccato technique	Spiccato pedagogical information	
14	Triplet Bowing Etude and Variations		Application of spiccato technique in 12/8		

Number	Title	Composer	Focus	Teacher Tips	Additional Notes
15	Sixteenth Note Bowing Etude and Variations		Application of spiccato technique in 4/4, includes bowing variations for 4-8-16 note slurs		
	II. Finger Pattern Studies				
16	First Two Finger Patterns		Review of finger patterns (F# and F $\natural$)	Explains Bass Pivot Fingerings	
17	Velocity Drill #1		Use of F# and F $\natural$ sequentially, increasing tempo		
18	Finger Pattern Drill #1: Natural and Sharp		Use of F# to C $\natural$, either using slide or finger sub		
19	Bourree		Use of high 2 and low 2, accidentals for F#, includes chord symbols for harmonies	Many of the melodic exercises in this Habits method have chord symbols written above the melody in both the conductor's score and student parts*** see pg 15 for more information	
20	Velocity Drill #2		Bass 1/2 position, others on G string. Use of B $\natural$ and B $\flat$		
21	Lowcountry Loure		Chromatic alterations in context of piece, three note slurs in 6/8		
22	Finger Pattern #3		Introduces Eb, Low 1		
23	Finger Pattern Drill #2: Back and Forth		Introduces B $\flat$, Alternating low 1 and regular 1		
24	Largo from the "New World Symphony"	Antonin Dvorak	Piece with all Low 1, Bases shifting from 2nd to 1/2 position		
25	Wide Open Spaces		Has Ab, alternates Ab and A $\natural$, Bases must pivot, Others must "shift"		
26	Minor Progression		G minor with some melodic minor substitutions (Eb, F $\natural$, to E $\natural$, F#)		
27	Largo Lamentoso		G minor with one melodic substitution, one dotted quarter rhythm		

Number	Title	Composer	Focus	Teacher Tips	Additional Notes
28	Carolina Reel		Bb major, sixteenth notes, chromatic substitutions		
29	Dominant Etude		Includes some Bb to B $\sharp$ and F $\sharp$ to F $\flat$, Triple stops at end for Violin, Viola, Cello		
30	Preparing for Pattern #4		Introducing G $\sharp$, substitutions from G $\flat$ to G $\sharp$		
31	Finger Pattern #4		Three sharps, G $\flat$ to G $\sharp$, triplets	Forward extension cello pedagogical information	
32	Sunrise Salute		Four sharps, focus on G $\sharp$ and extensions		
33	Major Progression		Four sharps, no melodic substitutions		
34	Finger Pattern Drill #4		G $\sharp$ focus again, includes C $\flat$ in last measure	Forward extension cello pedagogical information	
35	Position Etude in 1st Position		Four sharps, D $\flat$ and C $\flat$		
36	Velocity Drill #3		Three sharps, 16 note slurs, no accidentals		
37	Allegro in A Major		Three sharps, 6/8 16th notes, G $\flat$ to G $\sharp$		
38	Velocity Etude		To be performed as written (finger pattern #4), then pattern #2 and #3	Assessment	
39	Velocity Review and Test		Uses finger pattern #2, #3, and #4		
40	Tetrachord Etude		Uses all finger patterns, including low 1 (Eb), cello shifting to 2nd position		
41	Tetrachord Review and Test		Same, in triplets	Assessment	
42	Finger Pattern #5		Three flats, Another 3-4 finger pattern but with flats, cello shifting to 2nd	Mentions Phrygian and Lydian Patterns*** see pg 26 for more	
43	Finger Pattern Drill #5		Three flats, 12/8 time, cello shifting to 2nd		
44	Over the Highlands		Three flats, cello shifting to 2nd		

Number	Title	Composer	Focus	Teacher Tips	Additional Notes
45	Crossing Strings in Flats		Three flats, cello shifting to 2nd		
46	E-Flat Folly		Three flats, cello shifting to 2nd		
47	Finger Pattern #6		Four sharps, Open hand pattern for vln/vla (high 4), forward extensions cello		
48	Deja Vu: Crossing Strings in Sharps		Four sharps, Open hand pattern for vln/vla (high 4), forward extensions cello		
49	Half Position Drill		Four sharps, half position (adds A# accidental)		
50	Hornpipe		Four sharps, half position (goes between A $\natural$ and A#)		
51	Chromatic Fingering Drill		Uses "standard" chromatic finger patterns (uses potentially outdated fingering for violin/vla)		
52	Two-Octave Chromatic Scale		Same as above, extension for vln 4th finger		
53	Introducing Trills		1/2 step and whole step trills between 1-2, 2-3 (vln/vla), 1-3, 2-4, 3-4 (cello), 1-4, 2-4 (bass); extensions in cello		
54	Trill Drill		Includes trill between 1-2 (bass), cello extensions		
55	Through the Keys		Scales/Arpeggios from three flats (Eb) to four sharps (E), focus on going between finger patterns		
	III. Shifting and Position Studies				
56	Introduction: Shifting to the Harmonic		Harmonics	Shifting pedagogical information	
57	Shifting to 3rd Position		Same finger shifts 1st to 3rd position		

Number	Title	Composer	Focus	Teacher Tips	Additional Notes
58	Shifting to the Same Finger		Same finger shifts 1st to 3rd position		
59	Position Drill #1		3rd vln/vla/cello, 3rd and 4th bass		
60	The Forgotten Temple		3rd vln/vla/cello, 2th and 3rd bass		
61	Position Drill #2		3rd vln/vla, 3rd extended cello, 4th and 5th bass		
62	Sunrise Salute		3rd vln/vla, 3rd extended cello, 3rd and 4th bass		
63	Tetrachord Etude		Includes tuning notes, 3rd vln/vla, 3rd and 4th cello, 3rd and 5th bass, includes each finger pattern		
64	Position Drill #3		3rd vln/vla, 3rd and 4th cello, 1/2-3rd bass, E and F# accidentals		
65	Moonlight Minuet		3rd vln/vla, 3rd and 4th cello, 2nd-5th bass		
66	Position Drill #4		3rd vln/vla, 3rd extended and 4th cello, 4th and 5th bass		
67	Position Etude in 3rd Position		3rd vln/vla, 3rd extended cello, 2nd-4th bass, F and Eb accidentals		
68	Shifting In and Out of First Position		1st to 3rd vln/vla/cello, 1st-3rd bass, F# accidentals		
69	Toy Soldier March		1st to 3rd vln/vla, 1st-4th cello, 1st-2nd bass		
70	Shifting to a Different Finger		1st to 3rd vln/vla, 1st extended to 3rd cello, 1st-5th bass, F# and C# accidentals		
71	Misty Mountain		1st to 3rd vln/vla/cello, 1st-4th bass, C# accidentals		
72	Shifting Drill #1		1st to 3rd vln/vla, 1st-4th with 3rd extended cello, 1st-2nd bass		
73	Shifting Etude #1		1st to 3rd vln/vla, 1st-3rd extended cello, 1st-4th bass		

Number	Title	Composer	Focus	Teacher Tips	Additional Notes
74	Shifting Drill #2		1st to 3rd vln/vla, 1st-3rd extended cello, 1st-4th bass		
75	Giga Giocso		1st to 3rd vln/vla, 1st-4th with 3rd extended cello, 1st-4th bass, three note slurs		
76	Shifting Drill #3: Flat Patterns		1st to 3rd vln/vla/cello, 1/2-3rd bass		
77	Shifting Etude #2		Three flats, 1st to 3rd vln/vla, 1st extended-3rd cello, 1/2-4th bass, finger replacement		
78	Hilly Flats		Three flats, 1st to 3rd vln/vla, 1st extended-3rd extended cello, 1/2-5th bass		
79	Silent Shifting		Three flats, 1st to 3rd vln/vla, 1st extended-3rd cello, 1/2-3rd bass, dotted eighth notes (rhythmic elongation), three note slur	Addresses "Classical" shift vs. "Romantic" shift	
80	Silent Shifting #2		Three flats, 1st to 3rd vln/vla/cello, 2nd-3rd bass, dotted eighth notes, three note slur		
81	Silent Shifting Etude		Three flats, 1st to 3rd vln/vla, 1/2 to 3rd cello, 1/2 to 3rd bass		
82	Windy Waltz		Three flats, 1st to 3rd vln/vla, 1st extended to 3rd cello, 1/2-3rd bass		
83	Silent Shifting #3		1st to 3rd vln/vla/cello/bass, dotted eighth notes, three note slur		
84	Shifting Etude #3		1st to 3rd vln/vla, 1st to 3rd extended cello, 1st-4th bass		
85	Shifting to 4th Position		1st to 4th vln/vla/cello/bass		
86	Focus on 4th Position		1st to 4th vln/vla/cello, 3rd-5th bass		
87	Navigating the High C's		1st to 3rd vln/vla, 1st to 4th cello, 1st-5th bass		

Number	Title	Composer	Focus	Teacher Tips	Additional Notes
88	Introducing 2nd Position		1st to 2nd vln/vla, 1st-3rd with 2nd extended cello, 1/2-5th bass		
89	Position Etude in 2nd Position		2nd vln/vla, 2nd extended cello, 1/2-3rd bass		
90	Shifting Etude #4		1st to 3rd vln/vla, 2nd extended to 4th cello, 1st-3rd bass		
91	D Major Scale and Arpeggio on One String		1st to 3rd extended or 4th vln/vla, 1st to 4th extended or 3rd to 5th cello, 1st-5th bass		
92	D Minor Scale and Arpeggio on One String		1st to 4th vln/vla, 1st to 4th extended or 3rd to 5th cello, 1st-5th bass, melodic minor (chromatic alteration)		
93	Shifting Etude #5		Three sharps, 1st to 3rd vln/vla, 2nd to 4th extended cello, 1st to 3rd bass		
94	Position Etude: 4th Position		Three sharps, 4th position vln/vla, 4th extended cello, 3rd to 5th bass, G $\sharp$ accidental		
95	Shifting to a Different String		1st to 3rd vln/vla, 1st-4th cello, 1st-5th bass, Eb and Bb accidentals		
96	Shifting Drill #4: String Crossings and Flats		Three flats, 1st-3rd vln/vla, 1st extended-4th cello, 1/2-5th bass		
97	E-Flat Etude		Three flats, 1st-4th vln/vla, 1st extended-4th cello, 1/2-3rd bass		
98	Shifting Etude #6		1st to 3rd vln/vla, 1st-4th with 3rd extended cello, 1st-5th bass, finger replacement		
99	My Second Home		1st to 2nd vln/vla, 1st-3rd with 2nd extended cello, 1/2-5th bass		
100	E-Flat Major Scale and Arpeggio		Three flats, 1st-3rd-5th OR 1st-4th extension vln/vla, 1st to 6th position cello, 1st to 7th?? Bass	Shifting pedagogical information	

Number	Title	Composer	Focus	Teacher Tips	Additional Notes
101	E Minor Scale and Arpeggio		1st-3rd-5th OR 1st-4th-5th vln/vla, 1st to 6th position with extensions cello, 1st to 7th?? Bass, melodic minor (chromatic alteration)		
102	5th Position Drill		3rd to 5th vln/vla, 3rd-6th cello, 4th-5th bass		
103	Position Etude: 5th Position		5th vln/vla/cello, 3rd-6th bass, Gb and Ab accidental		
	IV. Scales, Arpeggios and Thirds		(Bass shifting almost every exercise still)		
	C Major				
104	Tuning Canon		Scale Degrees: 1, 7, 1, 4, 3, 2, 5, 5, 1		
105	Tuning Chords		Chords: vi, ii6, V7, I; shifting in vln/vla		Tuning Chords has the opportunity to connect with standards 2D 1.3 and 3.1
106	One-Octave Scale and Arpeggio		1st to 2nd bass		
107	Two-Octave Scale and Arpeggio		1st to 3rd vln		
108	Dominant Arpeggio		Vla Extension, 1st to 3rd Cello, 1st-4th bass		
109	Thirds		1st to 3rd vln, 1st-4th bass		
	G Major				
110	Tuning Canon		Cello Extension, 1st to 3rd bass		
111	Tuning Chords		1st-4th bass		
112	One-Octave Scale and Arpeggio		1st to 2nd bass		

Number	Title	Composer	Focus	Teacher Tips	Additional Notes
113	Two-Octave Scale and Arpeggio		1st to 3rd vla, 1st-4th with 3rd extended cello, 1st-5th bass		
114	Dominant Arpeggio		Vln and Cello Extension, 1st-3rd bass		
115	Thirds		1st-5th vla, 1st-5th with 3rd extended cello, 1st-5th bass		
	D Major				
116	Tuning Canon		Cello Extension		
117	Tuning Chords		1st to 3rd vla/bass		
118	One-Octave Scale and Arpeggio		1st to 3rd bass		
119	Two-Octave Scale and Arpeggio		1st to 3rd vln, Cello Extension, 1st to 3rd bass		
120	Dominant Arpeggio		1/2 position vla/cello, 1st-5th bass		
121	Thirds		1/2-2nd with extension cello, 1st-4th bass		
	A Major		Three Sharps		
122	Tuning Canon		1st to 3rd cello		
123	Tuning Chords		Extension cello		
124	One-Octave Scale and Arpeggio		Extension cello, 1/2 to 1st bass		
125	Two-Octave Scale and Arpeggio		1st to 4th vla, 1st-5th cello/bass		
126	Dominant Arpeggio		Extension cello, 1st-4th bass		
127	Thirds		1st-5th vla, 1st-4th cello, 1st-2nd bass		
	E Major		Four Sharps		Habits stops labeling extensions and some shifts at this point

Number	Title	Composer	Focus	Teacher Tips	Additional Notes
128	Tuning Canon		1st to 3rd cello, 1/2 to 1st bass		
129	Tuning Chords		Extension cello, 1st-4th bass		
130	One-Octave Scale and Arpeggio		1st extended to 3rd cello, 1/2 to 1st bass		
131	Two-Octave Scale and Arpeggio		1st to 4th vln, 1st-3rd with extension cello, 1st-5th bass		
132	Dominant Arpeggio		1/2-2nd with extension cello, 1st-5th bass		
133	Thirds		1st-5th vln/bass, 1st to 3rd vla, 1st-3rd with extension cello		
	F Major				
134	Tuning Canon		Cello extensions, 1st to 2nd bass		
135	Tuning Chords		1st extended to 4th cello, 1st-5th bass		
136	One-Octave Scale and Arpeggio		1/2 position bass		
137	Two-Octave Scale and Arpeggio		1st-5th vln, 1st to 3rd vla, 1st extended-4th cello, 1/2-4th bass		
138	Dominant Arpeggio		Cello extensions		
139	Thirds		1st-7th violin, 1st to 3rd vla, 1st extended-4th cello, 1st-5th bass		
	Bb Major				
140	Tuning Canon		Cello extensions		
141	Tuning Chords		Cello extensions		
142	One-Octave Scale and Arpeggio		Cello extensions		

Number	Title	Composer	Focus	Teacher Tips	Additional Notes
143	Two-Octave Scale and Arpeggio		1st-5th vla, 1st extended-4th cello, 1st-5th bass		All of a sudden used thumb position symbol for basses to indicate thumb position, however does not mark it as "7th position" or indicate any intended position
144	Dominant Arpeggio		1st extended to 2nd cello, 1/2-3rd bass		
145	Thirds		1st to 3rd vln, 1st-7th vla, 1st extended-5th cello, 1/2-2nd bass		
	Eb Major		Three Flats		
146	Tuning Canon		1st extended to 3rd cello		
147	Tuning Chords		1st extended to 3rd cello, 1/2 to 3rd bass		
148	One-Octave Scale and Arpeggio		Cello extensions, 1/2-4th bass		
149	Two-Octave Scale and Arpeggio		1st extended to 3rd cello, 1/2 to 3rd bass		
150	Dominant Arpeggio		1st extended to 2nd cello, 1/2-5th bass		Again uses thumb position for bass past 5th position

Number	Title	Composer	Focus	Teacher Tips	Additional Notes
151	Thirds		1st-5th vln, 1st to 3rd vla, 1st extended to 3rd cello, 1/2-5th bass		
	Ab Major		Four Flats		
152	Tuning Canon		2nd to 3rd extended cello, 1/2 to 3rd bass		
153	Tuning Chords		1st extended to 3rd cello, 1st to 3rd bass		
154	One-Octave Scale and Arpeggio		1st extended-3rd cello, 1st to 2nd bass		
155	Two-Octave Scale and Arpeggio		1st to 4th vla, 1st extended-5th cello, 1st-5th bass		
156	Dominant Arpeggio		1st extended-4th cello, 1st-3rd bass		
157	Thirds		1st-5th vla, 1st extended-6th cello, 1/2-3rd bass		
	A Melodic Minor				
158	Tuning Canon		cello extensions		
159	Tuning Chords		1st to 4th cello, 1st-4th bass		
160	One-Octave Scale and Arpeggio		cello extensions, 1/2 to 1st bass		
161	Two-Octave Scale and Arpeggio		1st to 4th vla, 1st extended-5th cello, 1st-5th bass		
162	Dominant Arpeggio		cello extensions, 1st-4th bass	Half position would be better than a shift?	
163	Thirds		1st-5th vla, 1st extended to 5th cello, 1/2-2nd bass		
	D Melodic Minor				
164	Tuning Canon		Cello extension		
165	Tuning Chords		1st to 3rd vln	Shifts not marked on this exercise	
166	One-Octave Scale and Arpeggio		Cello extension		

Number	Title	Composer	Focus	Teacher Tips	Additional Notes
167	Two-Octave Scale and Arpeggio		1st to 3rd vln, cello extension, 1/2-3rd bass		
168	Dominant Arpeggio		cello extension, 1st-5th bass		
169	Thirds		1st-5th vln/bass, 1st extended to 2nd cello		
	G Melodic Minor				
170	Tuning Canon		Cello extension		
171	Tuning Chords		1st-4th cello, 1st-6th bass	Shifts not marked on this exercise	
172	One-Octave Scale and Arpeggio		cello extension, 1/2 to 1st bass		
173	Two-Octave Scale and Arpeggio		1st-3rd vla, 1st extended-4th cello, 1/2-5th bass		
174	Dominant Arpeggio		Vln extension, cello extension, 1st-3rd bass		
175	Thirds		1st-5th vla, 1st extended-5th cello, 1st-5th bass		
	C Melodic Minor		Three Flats		
176	Tuning Canon		1st extended-2nd cello		
177	Tuning Chords		vln extension, cello extension, 2nd-3rd bass	Extensions not marked on this exercise	
178	One-Octave Scale and Arpeggio		Cello extensions, 1/2-2nd bass		
179	Two-Octave Scale and Arpeggio		1st extended-4th cello, 1/2-2nd bass		
180	Dominant Arpeggio		vla extension, 1st-4th cello/bass		
181	Thirds		1st to 3rd vln, 1st extended-3rd cello, 1/2-4th bass	Position mis-marked in cello part (labeled as 3rd when it's 2nd)	
	F Melodic Minor		Four Flats		
182	Tuning Canon		1st extended to 2nd cello, 1st to 2nd bass	Basses positions not marked	

Number	Title	Composer	Focus	Teacher Tips	Additional Notes
183	Tuning Chords		1st extended to 2nd cello, 1st to 2nd bass		
184	One-Octave Scale and Arpeggio		1st extended to 4th cello, 1/2 to 1st bass		
185	Two-Octave Scale and Arpeggio		1st-5th vln, 1st to 3rd vla, 1st extended to 3rd cello, 1/2-5th bass		
186	Dominant Arpeggio		cello extensions		
187	Thirds		1st-7th violin, 1st to 3rd vla, 1st extended-4th cello, 1st-5th bass		
	E Melodic Minor				
188	Tuning Canon		1st to 2nd cello, 1/2-2nd bass		
189	Tuning Chords		cello extensions		
190	One-Octave Scale and Arpeggio		1st extended to 3rd cello, 1/2 to 1st bass		
191	Two-Octave Scale and Arpeggio		1st to 4th vln, 1st extended-3rd cello, 1st-4th bass		
192	Dominant Arpeggio		1st extended to 2nd cello, 1/2-5th bass		
193	Thirds		1st-5th vln, 1st to 3rd vla, 1st extended-3rd cello, 1/2-5th bass		
	B Melodic Minor				
194	Tuning Canon		1st to 2nd cello, 1/2 to 1st bass	Bass positions not marked	
195	Tuning Chords		1st to 4th cello, 1st to 3rd bass		
196	One-Octave Scale and Arpeggio		1st extended to 3rd cello, 1st to 2nd bass		
197	Two-Octave Scale and Arpeggio		1st-5th vla, 1st extended-3rd cello, 1st to 2nd bass		
198	Dominant Arpeggio		extension vln, 1st extended-2nd cello, 1/2-3rd bass		
199	Thirds		1st-3rd vln, 1st-7th vla, 1st extended-7th cello, 1/2-3rd bass		Cello 7th position not marked

Number	Title	Composer	Focus	Teacher Tips	Additional Notes
	F# Melodic Minor		Three Sharps		
200	Tuning Canon		2nd to 3rd cello, 1st-3rd bass	Bass positions not marked	Cello position mismarked (not 3rd extended)
201	Tuning Chords		1st extended to 2nd cello, 1/2-2nd bass		
202	One-Octave Scale and Arpeggio		1st extended-4th cello		
203	Two-Octave Scale and Arpeggio		1st-5th vln, 1st to 3rd vla, 1st extended-4th cello, 1/2-5th bass		
204	Dominant Arpeggio		2nd extended to 3rd cello, 1/2-3rd bass		
205	Thirds		1st-7th violin, 1st to 3rd vla, 1st extended-5th cello, 1st-6th bass		
	C# Melodic Minor		Four Sharps		
206	Tuning Canon		2nd to 3rd cello		
207	Tuning Chords		1st extended-3rd cello, 1/2-2nd bass		
208	One-Octave Scale and Arpeggio		1st extended-2nd cello, 1/2-3rd bass		
209	Two-Octave Scale and Arpeggio		1st to 3rd vln, 1st extended-3rd cello, 1/2-2nd bass		
210	Dominant Arpeggio		extension vln, 1st extended-3rd cello, 1/2-5th bass		
211	Thirds		1st to 3rd vln, 1st extended-3rd cello, 1/2-4th bass		

Number	Title	Composer	Focus	Teacher Tips	Additional Notes
	V. Chorales			Pedagogical information about Tone, Intonation, Phrasing, and Musicianship	**mention of focus being on tone, intonation, phrasing, and musicianship
212	Chorale #1: Early One Morning	P. Grainger		Mentions "Just Intonation", specific phrasing points, and self-expression/feeling through meaning and purpose	
213	Chorale #2: Beautiful Savior	Willis			
214	Chorale #3: Hyfrodol	R. Prichard	dotted quarter		
215	Chorale #4: Engelberg	R. Vaughan Williams	1st to 2nd bass, F# to F $\flat$, Bb to B $\flat$		
216	Chorale #5: In the Bleak Midwinter	G. Holst	dotted quarter, Eb to E $\flat$		
217	Chorale #6: La Folia	A. Corelli	dotted quarter, sixteenths, C# to C $\sharp$, Bb to B $\flat$		
218	Chorale #7: We Three Kings	J. J. Hopkins, Jr.	cello extension		
219	Chorale #8: Largo, from the 1812 Overture	P. Tchaikovsky	three flats, ties across bar, dotted quarter, sixteenths, 1st to 2nd bass		
220	Chorale #9: Ode to Joy	L. van Beethoven	ties across bar, dotted quarter, C $\sharp$, G#, A#, 1st-3rd bass		
221	Chorale #10: Chorale from Symphony No. 1	J. Brahms	ties across bar, dotted half, chromatic pattern vla (B-Bb-A-G#), F#, 1st to 2nd bass		

Number	Title	Composer	Focus	Teacher Tips	Additional Notes
222	Chorale #11: Lo, How a Rose 'Ere Blooming	M. Praetorius	three sharps, dotted quarter, D#, A# to A $\flat$, extended cello		
223	Chorale #12: Andante Festivo	J. Sibelius	dotted quarter, D# to D $\flat$, G# to G $\flat$, 1st to 3rd vln, 1/2-4th cello		Positions not marked
224	Chorale: #13 Aase's Death	E. Grieg	ties across bar, dotted quarter, A#, E#, G# to G $\flat$, C# to C $\flat$, B $\flat$ to Bb, E $\flat$ to Eb, 1st-3rd vln, extended vla/cello, 1st-2nd cello,		
225	Chorale #14: Serenade for Strings	P. Tchaikovsky	Meter changes (duple to triple), Double/Triple stops (open and simple), ties across bar line, dotted quarter G# to G $\flat$, Ab, 1st-3rd vln, 1st-3rd cello, 1st to 2nd bass		Required shift in bass not marked
	VI. Rhythm Vocabulary			Suggested sequence, Pizzicato, and Counting systems	
226	A. Quarter Notes and Rests; Eighth Notes				
227					
228					
229					
230					
231	B. Eighth Rests				
232					
233					
234					
235					
236	C. Ties		Ties		
237			Ties		
238			Ties		
239			Ties		

Number	Title	Composer	Focus	Teacher Tips	Additional Notes
240			Ties		
241	D. Dotted Quarter Notes		Dotted quarter		
242			Dotted quarter, hooked bow		
243			Dotted quarter, ties		
244			Dotted quarter, ties		
245			Dotted quarter		
246	E. Syncopation		Ties		
247			Dotted quarter, hooked bow		
248			Dotted quarter		
249			Dotted quarter, ties		
250			Dotted quarter, ties		
251	F. Eighth Notes in Compound Meters		Hooked bow		
252					
253					
254			Dotted half, ties		
255			Ties		
256	G. Sixteenth Notes in Simple Meters		Sixteenths		
257			Sixteenths		
258			Sixteenths		
259			Sixteenths		
260			Sixteenths, ties		
261	H. Sixteenth Notes in Compound Meters		Sixteenths		
262			Sixteenths		
263			Sixteenths, ties		
264			Sixteenths, ties		

Number	Title	Composer	Focus	Teacher Tips	Additional Notes
265	I. Dotted Eighth-Sixteenth Combinations				
266			Hooked bows		
267			Hooked bows		
268					
269					
270			Hooked bows, ties		
271			Slurred staccato, hooked bows		
272			Ties		
273			Ties		
274			Hooked bows		
275	J. Triplets				
276					
277			Sixteenths		
278			Dotted quarter, sixteenths		
279			Dotted quarter, sixteenths		
	VII. Sight-Reading				
280	A. Quarter Notes and Eighth Notes				
281					
282					
283			Slurred Staccato		
284			Dotted half note		
285			Dotted half note		
286					
287			Slurred Staccato		
288	B. Eighth Rests				
289					
290					

Number	Title	Composer	Focus	Teacher Tips	Additional Notes
291					
292			Some syncopation		
293			Some syncopation		
294			Some syncopation		
295			Some syncopation		
296	C. Ties		Ties		
297			Ties		
298			Ties		
299			Ties		
300			Ties		
301			Ties, hooked bow		
302			Ties, hooked bow, slurred staccato		
303			Ties, hooked bow		
304	D. Dotted Quarter Notes		Dotted quarter, ties		
305			Dotted quarter, hooked bow		
306			Dotted quarter		
307			Dotted quarter, slurred staccato		
308			Dotted quarter, hooked bow		
309			Dotted quarter, hooked bow		
310			Dotted quarter, hooked bow, ties		
311	E. Syncopation				
312					
313			Dotted quarter, hooked bow		
314			Ties		
315			Dotted quarter, hooked bow, ties		
316			Dotted quarter, ties		
317			Bb to B $\flat$, C $\flat$ to C $\sharp$, hooked bow		
318	F. Eighth Notes in Compound Meters		Hooked bow		

Number	Title	Composer	Focus	Teacher Tips	Additional Notes
319					
320			Three note slurs		
321			Hooked bowing		
322			Ties, slurred staccato		
323			Ties, F# (no F $\sharp$), E $\flat$ (no E $\flat$)		
324			Slurred staccato, hooked bow		
325			Ties, slurred staccato, hooked bowing, some syncopation		
326	G. Sixteenth Notes in Simple Meters		Sixteenths		
327			Sixteenths, slurred staccato, hooked bow		
328			Sixteenths		
329			Sixteenths, slurred staccato		
330			Sixteenths, slurred staccato		
331			Sixteenths, Ties, Bow lift, B $\flat$ to B $\sharp$		
332			Sixteenths, Ties		
333			Sixteenths, Ties, F $\sharp$ to F#		
334			Sixteenths, Ties, C# to C $\sharp$, B $\flat$ to B $\sharp$		
335	H. Sixteenth Notes in Compound Meters		Sixteenths, slurred staccato		
336			Sixteenths		
337			Sixteenths, F# to F $\sharp$		
338			Sixteenths, hooked bow		
339			Sixteenths, slurred staccato, Ties, C $\sharp$ to C#, B $\flat$ to B $\sharp$		
340			Sixteenths, Ties		
341			Sixteenths, slurred staccato, Ties, C# to C $\sharp$, B $\sharp$ to B $\flat$, F# to F $\sharp$		
342			Sixteenths, slurred staccato, Ties		

Number	Title	Composer	Focus	Teacher Tips	Additional Notes
343	I. Dotted Eighth-Sixteenth Combinations		Sixteenths, Hooked bows		
344			Sixteenths, Hooked bows		
345			Sixteenths, Hooked bows		
346			Sixteenths, Hooked bows		
347			Sixteenths, G# (no G♯)		
348			Sixteenths, Hooked bows		
349			Sixteenths, slurred staccato		
350			Sixteenths, Hooked bows		
351	J. Triplets		Sixteenths, Hooked bows		
352			Slurred staccato		
353			Dotted rhythm, hooked bow		
354			Dotted rhythm		
355			Sixteenths		
356			Sixteenths		
357			Sixteenths		
358			Sixteenths, dotted eighth		
359			Sixteenths, dotted eighth		
360			C# to C♯, sixteenths, dotted eighth, ties		

	APPENDICIES				
	Calisthenics for Developing Flawless Hand Positions				
	Strategies for Improving Intonation				
	Additional Strategies for Teaching Rhythm and Sight-Reading				
	Strategies for Teaching Spiccato				
	Strategies for Teaching Vibrato				
	Music Making Exercises				