**Violin**

The **violin** is the smallest and highest-pitch instrument of the orchestral bowed string family. Although the violin had ancestors, it appeared in its modern form around 1550. The earliest violin makers of record were Andre Amati and Gasparo di Bertolotti, both Italian luthiers. Today's violin is different from these mid-16th century violins, but the first violins were quite close to the final structure.

Violins have an E, A, D, and G string. Violinists read the treble clef. High in register, the violin's pitch is strident, but it also can produce rich melodic tones. The violin is a necessary instrument in symphonies, string quartets, chamber ensembles, and fiddle music. Some famous violin literature includes the Paganini Caprices and violin concertos by Tchaikovsky, Mozart, Brahms, Beethoven, and Bartók. Itzhak Pearlman and Hilary Hahn are a few current world-renown violinists. TwoSet violin and Ray Chen are keeping the violin and orchestra popular using social media to create comedic videos while showcasing their dexterous orchestral techniques.

"I know that the most joy in my life has come to me from my violin." -Albert Einstein

**Viola**

The **viola** is the alto instrument of the orchestral bowed string family.  The viola was also believed to have been invented by Andre Amati and Gasparo di Bertolotti who were influenced by earlier instruments. The viola was played much differently than today and there were two main predecessors: the viola da braccio and the viola da gamba. In these stages, the viola mostly doubled the cello part. Mozart, and other composers, began composing significant independent viola lines in their repertoire. It was not until the 20th century that the viola's more technically demanding soloistic repertoire appeared. The 20th century composers also began featuring the viola's power and skill in innovative ways in their major works.

Violas have an A, D, G, and C string. Violists read the alto and treble clefs. The viola's timbre is richer, warmer, and heavier than the violin's. The viola is also a necessary instrument in symphonies, string quartets, and chamber ensembles. Some famous viola literature includes the Rebecca Clarke Viola Sonata, Berlioz's Harold in Italy, and the viola concertos by Stamitz, Walton, Hindemith and Barók. Tabea Zimmerman and Yuri Bashmet are a few current world-renown violists. That Viola Kid is keeping the viola and orchestra popular by using social media and YouTube to create inspirational and practice tip videos while showcasing his advanced technical and musical abilities.

"When I am playing the viola, I feel a sense of oneness..." -William Primrose

**Cello**

The **cello** is the tenor instrument of the orchestral bowed string family. The early cello's invention is credited to luthiers Andre Amati, Gasparo da Salo, and Paolo Maggini. Antonio Stradivari, however, adapted these earlier cellos into the cello we know today. Early cello repertoire includes mostly bass lines. After Stradivari developed the cello to today's size, more virtuosic compositions and performers emerged.

Cellos have an A, D, G, and C string like the viola, but their strings are an octave lower in pitch. Cellists read the bass, tenor, and treble clefs. The cello's timbre most closely resembes the human voice. The cello's warm, deep timbre provides a range of tonal colors. The cello is a necessary instrument in symphonies, string quartets, chamber ensembles, and cello choirs. Some famous cello literature includes the Cello Concertos by Shostakovich, Dvorák, and Elgar, as well as the Beethoven Cello Sonata and Bach's Six Suites for Cello. Yo-Yo Ma and Jacqueline du Pré (d. 1987) are some famous cellists. Sheku Kanneh-Mason is keeping the cello and orchestra popular today through his incredible accomplishments. He performed at Prince Harry and Meghan Markle's wedding, and is the first black musician to win the BBC Young Musician award since it began in 1978. Two Cellos are keeping the cello relevant by performing current, popular music at their exciting concerts.

The legendary cellist Pablo Casals was asked why he continued to practice at age 90. "Because I think I'm making progress," he replied.

**Double Bass**

The **double bass** is the largest and lowest instrument of the orchestral bowed string family. Paul Brun's research claims that the double bass was constructed after the violin, following the violin's instructional model. Early double basses had numerous tuning systems and constructions throughout the world. Today's development of the double bass still has irregularities which allows the musician more freedom in choice. Like the viola, the virtuosic repertoire for the double bass did not appear significantly until the 20th century. Bass pedagogy is still being refined today.

Basses have a G, D, A, and E string and it is the only orchestral string instrument that is tuned in perfect 4ths instead of perfect 5ths. Bassists read the bass and treble clefs. The bass's timbre is heavy, tender, and warm. The bass is a necessary instrument in symphonies, jazz, bluegrass, and chamber ensembles. Some famous double bass literature includes the solo from Mahler's Third Symphony and the Double Bass Concertos by Dragonetti, Koussevitzky, and Bottesini. Gary Karr and Edgar Meyer are some famous double bassists. Dennis Whittaker and David Connor are keeping the double bass and orchestra popular today through consistent and energetic community engagement. Whittaker is an innovative pedagogue and double bass instructor at the University of Houston and Connor is a bassist and community-embedded musician for the Houston Symphony who performs regularly at the FBISD String Fling.

"No matter what kind of music you’re playing, the bass enhances the sound and makes it more beautiful and full." -Charlie Haden