

5 Amazingly fast and simple lessons to teach our musical systems: pitch reading, naturals & accidentals, scales & key signatures, rhythm, meter signatures

The purpose of this presentation is to give teachers short lessons that can teach students the broad structures we use in music. We often teach puzzle pieces; a mnemonic for the lines and spaces, where E, F# and G go on the D string, that a quarter note is one beat long, without creating a complete and coherent system. After we teach the puzzle pieces mentioned above students are often confused by things like ledger lines, where G goes on the E string, or what F natural is, and things like 2/2 or 6/8 time. These 5 lessons make it possible to teach larger structures in short enough segments to fit the tightest time-lines, and in ways which allow students to understand how things work, and what the next logical step will be.

The rationales for each lesson come from working with many students in individual lessons over the past thirty years, and discovering what they don't really know or understand.

Below you will find a step by step guide to teaching the 5 lessons as they are being taught to you so you can recreate them for your students at home.

Lesson #1: Note Reading on the Staff

Rationale: Students who easily identify the note associated with their A string as an A and can not identify the note one step higher as a B

Reading notes on the staff should be somewhat intuitive. There are only three things you need to know to be able to comprehend the entire staff:

- 1: The Musical Alphabet and how it works (After G we start again with A)
- 2: What happens as you move up and down the staff (intuitive)
- 3: The letter name of 1 marker note

Steps for lesson 1:

- 1: Place the musical alphabet on the board and explain that we use letter names to name the pitches we play and hear.
- 2: Place a line on the board and ask students if they want the first note on a line or in a space. Place a note head in the appropriate location, under the line for a space note, and on the line for a line note.
- 3: Ask students what letter they would like to name the note. Give the note the appropriate letter name.
- 4: Add a 2nd note, one note higher. Ask students if the 2nd note is higher. Ask students if it looks like it is a lot higher or a little higher. Ask students what they think the note is. They will intuitively figure out the answer.
- 5: Continue creating a staff going up and down and having students tell you what note you are writing. You will not be able to write as fast as they tell you.
- 6: Teach students an appropriate marker note for their instrument. Open D works well for all instruments except viola. Open A works great for them, but requires so much backwards work that teaching them Open D probably works just as well. You can tell violas that D is in the third space.
- 7: Turn to the page in the book that has D and A with no letter names in the notes. Pick an exercise that does not have a name like D's and A's. Have students identify the first note D, and then figure out the first different note (A) using their knowledge. Turn to a finger page without letter names and have them figure out some of the notes. Letter names only. For the time being they don't have to know sharps or naturals.

8: I like to extend this lesson to the strings. The D note we just learned is your D string. The A note we just learned is your A string. How do you think we play notes between D and A? (Students will almost all know we play with the fingers)

9: Demo what happens when you put a finger on the string and slide it towards the bridge. Is that pitch going higher or lower? Some students will get this wrong so make sure they know the pitch is going higher.

10: Since the pitch is going higher as the finger moves towards the bridge ask students what note they think they will get when they put down their first finger? How about their 2nd. (All instruments get an E with a properly placed 1st finger, and an F with a properly placed 2nd finger, but do not worry about spacing on this lesson. Students will learn to understand the spacing they need in lesson 2)

Lesson #2 Sharps, Flats, and Naturals

Rationale: Students who don't understand that there is a natural place for each note, and that each note can then be sharped or flatted from its natural position, and the constant mistakes made when students are supposed to play F natural.

To discover where all the notes are located on their instruments the only things students need to understand is the spacing for the natural notes (memorize the two ½ step places {B/C & E/F}) and what sharps and flats are and what they do to the natural note placements.

The easy pattern of black and white keys on a piano makes it quite easy to teach sharps, flats, and naturals, but it is awkward for use when teaching strings. Instead I use a construct I call Mr. Henry's Half-Step Stairway.

1: Explain that the smallest distance between two notes in western music is called a half-step. You can demonstrate the sound, and you can also explain some musical systems recognize smaller distances like a ¼ step.

2: Create a 13 step stairway and start with A on the bottom (1st) step. Since 2 half-steps make a whole skip to the 3rd step and write B, put C on the 4th step and continue putting the spacing of the natural notes until you get back to A on the top step.

3: Ask students how many halves make a whole(2) Next ask, if two half steps make a whole step, how far is it between A and B on the half step stairway? How far between B and C. Take time to explain that it took thousands of years to come up with this system, and that it is now in black and white on the piano keyboard and will not be changing any time soon. Make sure they understand that this is the spacing of the natural notes. Have students memorize the ½ steps

4: Ask students what they think are on the empty steps. Many will guess sharps and flats.

5: Teach students that sharps raise notes from their natural place ½ step, and that flats lower notes from their natural places by ½ step. Pick a step and have students figure out what enharmonically spelled notes could go on that step. Do a couple and let the kids do the rest as homework.

6: Now have students get their instruments. Explain that a whole step is about an inch, and a ½ step is about a half inch or touching for violins and violas (cello 1 and 2 inches; bass 2 and 4 inches)

7: Have the students find their D string. Ask them how far it will need to be from D to E (a whole step). Have them look at the first tape (surely you are using tapes, dots, or some sort of marking for the 1st finger) and ask what note they think they will get if they put a finger down on the first tape on the D string.

8: Have students place their finger on the tape and play E. Ask them again how far it is from D to E. Ask them if they think there is a note between D and E that doesn't have a tape marked on their instrument. Ask them what they think the name of that note would be? D# of E flat are both correct.

9: Have the students put the finger back on E. Ask them how far it is from E to F. Have them play an F. Do the same for G and A. Note that the A can be played on the D string or the A string.

10: Students now have enough information to figure out where their fingers should go on each string to play the natural notes. Have them go home and figure out the spacing they need on each string for themselves. They can diagram it, or they can practice it on the different strings.

Lesson #3: Key signatures and Major scales.

Rationale: Students who can not apply a key signature to their music, and who have no idea of how to create a scale or what a scale really is.

1: Put the half-step stairway on the board.

2: Teach students that scales are patterns of sound. You can start on any note of the scale and each has it's own pattern. Explain that over the centuries much of the music we play came to be built in two patterns of sound that we now call major, and minor.

3: Write the pattern for a major scale on the board: W W 1/2 W W W 1/2 Play a major scale, then play the same scale with one note changed so students can hear what a change of pattern does. Do several more changing demonstrations.

4: Explain that to create a major scale you can not skip any letters, and you must create the already noted pattern of whole and 1/2 steps. Now ask the students to look at the 1/2 step stairway and find the only note you can start on that creates the major scale pattern without adjusting any of the natural notes. If someone suggests a wrong note to start on, work through the whole pattern with them until it doesn't fit the needed pattern.

5: When they finally arrive at the correct answer explain that because starting on C produces the pattern of a Major scale with all natural notes we call it a C Major scale.

6: Explain that by following the pattern and never skipping a note name we can create Major scales by starting on any step of the stairway. If we do it correctly, we should arrive back at the starting note, but we will have to make some adjustments along the way to make it work. Because it is useful, make the next scale you build start on D. Work them through the first part of the scale. How far must it be from D to the next note E? Is it? How far must it be from E to the next note F? Is it? Since we can't skip F what will we need to do to it to create a whole step? (At this point cross out the F on the stairway and write an F# on the correct step) How far must it be from F# to the next note G? Is it. Now have them finish the scale for themselves.

7: Ask students how many notes they had to change to create a Major scale starting on D. Clarify for them what notes should have changed and how they changed.

8: Work through the fingering of a D Major scale on the instrument. I have students put down the natural note first. "E to F is a half step. Put down an F. Now, for this scale we need F# so we need to raise the F to F# to create a whole step."

9: Explain that when people were writing down all these sharps and flats next to every note it got messy and hard to read. Because most of the notes in the music they were writing stayed with a single pattern for long periods of time composers figured out they only needed to write the sharps or flats needed for the pattern they were using once at the beginning of the piece. We call this the key signature. The key signature for D Major tells us that all the notes are in their natural places except for F and C which we will sharp, or raise a 1/2 step higher than their natural place. As music got longer composers sometimes changed key signatures in the middle of a piece so they decided to put key signatures on every line at the start of the line to help the musicians keep track.

10: Pick a piece in the book with 2 sharps in the key signature that starts with the notes D, E and F#. Explain that the sharps work like note heads with the center of the sharp and the line or space it is on determining its name. Have students figure out the names of the two sharps before telling them. Explain the rule that says we read sharps from left to right and that they always come in the same order with F# always first. Also explain that sharps and flats in the key signature apply to all the notes of that letter name. Now have the students say the first 3 note names in the piece. Play the first 3 notes for them. Next have students do a mental

cross-out of the key signature so it is now empty and have them say the letter names again. Ask if the piece will sound the same. Do a quick demo of the new tones.

11: Students now have enough information to build their own major scales. As homework have them figure out the notes of a G Major scale, what would be in the key signature and how to finger it on their instrument. Have them try a flat scale too. You can also have them invent their own scale if you like.

Lesson #4: The Rhythmic System

Rationale: Students who can't play quarter notes followed by eighth notes correctly and who are completely flummoxed by 6/8 time.

Important Concept: Rhythm is relational yet we usually teach rhythm as concrete ideas. We teach a quarter note as one beat and a whole note as four beats long. These statements are true only in specific circumstances. It is possible to teach rhythm in such a way that what we teach always remains true and understandable.

1: Begin by putting five empty note heads on the board. Write the numeral one underneath the first note head. Name the empty head with its proper name: whole note. Do not divulge that it is four beats long. Explain that rhythm works in fractions. Put the fraction $1/1$ under the first note.

2: With the next note head create a half note explaining the addition of the stem. Use the next note head to create a half note with a stem going in the opposite direction to show that the direction of the stem has no effect on rhythm. Underneath the first half note write the fraction $1/2$. Ask the students what kind of note it is while pointing at the fraction. Teach students that a half note is twice as fast as a whole note. This language is almost never taught yet it seems to be perhaps the most critical component of understanding our rhythmic system. Also teach them that two half notes equal a whole note.

3: Demonstrate a whole note by patting your leg with your right hand and making a slow circle (for yourself to keep steady feel the whole note in $2/2$ time—not too slow) Say: If this is the speed of a whole note, then half notes would be twice as fast, like this. At this time bring your left hand above your leg and hit its palm on the upswing of your right hand at the half note beats.

4: Next fill in the head of the next note which should already have a stem. Write $1/4$ under the note, ask the students to name the note and let them know a quarter note is twice as fast as a half note. Do the same demo by tapping a half note on your leg (a little faster than the whole notes used earlier, but not as fast as the half notes in that demonstration) and showing the transition to quarter notes that are twice as fast.

5: With the next note head create a quarter note and add a flag, pointing out the flag and naming it. Ask the students if they know what number will go below the note. Some will guess a six, some will guess or know an eight. Teach that the bottom number is doubling. "How much faster is this note than the quarter note?" Twice as fast. "What is this note called?" Now demonstrate a quarter note pulse on your leg and move to eighth notes by tapping your palm. Invite your students to tap and pat with you.

6: Now is a good time to introduce the concept that if a quarter note is twice as fast as a half note, a half note is twice as long as a quarter note. Continue the leg patting demonstration with the quarter note beat and create a half note circle. You may want to vocalize the continuing quarter note pulse in some way. Have students tap with you and go between quarter, eighth, and half notes.

7: Create a 16^{th} note with the final note head and do the same routine. Create another 16^{th} note and bar them together so students can see a barred combination. Barring is a reading issue more than a rhythmic issue, but if you wish to take time to show how bars work go ahead.

8: Explain to students that while composers can choose any of these notes to be the pulse of the piece, the music the student will be working with the first year almost always uses the quarter note as the pulse, and that the student will have to be able to go twice as fast as the quarter note and twice as slow.

9: Introduce the idea of rests for as many notes as you like. Each note has a symbol to show us to be silent for the same length of time as if we were playing a note.

10: You can introduce any tuplet in a relational manner when they arise

Bonus Lesson: Dotted Notes

Rationale: Because something that adds $\frac{1}{2}$ the value of the note it follows is still confusing to me after 30+ years of teaching.

1: Draw a whole, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$ and $\frac{1}{16}^{\text{th}}$ note on the board.

2: Over the half note create a dotted half note.

3: Explain that the dot is shorthand for adding the next note to the right. Draw a circle from the dot to the quarter note and explain that the half note plus the dot creates a note that is a quarter note plus a half note, or a note that is 3 quarter notes long.

4: Create a dotted quarter note over the quarter note and repeat the process.

5: Pat your leg in quarter notes. Add the eighth note beat by tapping your hand. Ask how many eighth notes long the dotted quarter note is.

Lesson #5: Time or Meter Signatures

Rationale: The difficulty students have with changing time signatures.

1: Draw a whole, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$ and $\frac{1}{16}^{\text{th}}$ note on the board and put their appropriate fractions underneath.

2: Explain that when people wrote the first music down they often got lost until they discovered that it was easier to read and understand when they broke it into small bites. At this time introduce bar lines and measures if you haven't already. They also found it easier when they made the small bites the same size.

3: Have your students look in their books at a piece with a numerical time signature with a 4 on the bottom and ask them what the bottom number is. Ask if the fraction in the book has anything in common with one they see on the board?

4: Write a 4 next to the fraction of $\frac{1}{4}$ and read it: 4 $\frac{1}{4}$ (quarter) notes will fit in one measure. That also means any combination of notes and rests that equal 4 quarter notes will fit. $\frac{4}{4}$ is a shorthand way of writing this information. You may wish to ask how many eighth notes or other length notes will fit. Try putting some other numbers up and reading them with different fractions. 6 $\frac{1}{8}$ (six eighth notes) 3 $\frac{1}{1}$ (three whole notes) etc.

5: Explain that the time signature combined with a speed word such as allegro or adagio will suggest to a conductor what type of note should be the pulse of the music. In our first year it is almost always going to be a quarter note that is the pulse of the music. We generally say that the note that is the pulse of the music is one beat long, so this year a quarter note will be one beat long. As our music becomes more complex we will begin to see other notes become the pulse, and then those notes might become one beat long. The thing that never changes is the twice as fast and twice as slow relationships between the notes.

Meet Your Presenter

Jerry Henry has been a public school orchestra teacher for most of the past twenty-five years. Jerry graduated from Wartburg College in 1980 with a BME and received his Masters degree in Education from Southwestern Oklahoma State University in Weatherford, Oklahoma in 1981. He also has an MBA from the University of Iowa.

Jerry's teaching resume includes two years of team teaching beginning orchestra in Edinburg, Texas; seven years in Cedar Rapids, Iowa at Washington High School, Franklin Junior High and several associated elementary schools; two years of teaching English in Qingdao, China; and eight years as the director of orchestras for the Linn-Mar Community School District in Marion, Iowa teaching grades 5-12. Most recently he spent six years in Davenport, Iowa teaching grades 7-12.

He was honored as an outstanding high school teacher by the University of California at San Diego in 2000, and was in the Who's Who of American teachers in 2001. He received the award as ASTA with NSOA State of Iowa String Teacher of the Year for the 2001 school year and was recently inducted into the Washington High School Performing Arts Hall of Fame. He has been active as a clinician, guest director, and adjudicator in Iowa and Illinois and has been a contributor to the Iowa String Teachers Journal. Throughout his career he has maintained a consistent schedule of performance and is presently a member of Orchestra Iowa, the concertmaster of the Clinton Symphony, and the 2nd violinist in Quartrio, a flexible string quartet and trio.

Jerry is the past president of the Iowa String Teachers Association and is a guest speaker advocating for string programs and presenting his teaching ideas in forums throughout the country. He is offering a summer class in Bettendorf, Iowa from June 24-28, 2013 which is available for up to 3 graduate credits. Jerry's company, Orchestra Triage Inc. offers a wide range of help for orchestra teachers and programs including teacher training, in-service presentations, program evaluation, clinics, and advocacy. Jerry has just finished a book based on his teaching ideas entitled "Orchestra Triage: A Philosophy for Classroom Orchestra teachers and methods to match. The book is presently available on CD in Microsoft Word format. He will be presenting at the ASTA convention in Providence in February 2013, and Orchestra Triage will also have a booth at the convention. Jerry resides in LeClaire, Iowa with Jennifer, his wife of twenty-nine years. His hobbies include writing, traveling, golf, and playing duplicate bridge.

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