

## What Every ONW Orchestra Member Should Know...

Welcome to the Olathe Northwest Orchestra! We take pride in our program and are glad you can be a part of it. In order to be a fully functioning member of the ONW Orchestra, there are a few things you should know.

First, check your email regularly, as this is often a means of communication from the director. Second, check the web site frequently: **[www.ONWOrchestra.net](http://www.ONWOrchestra.net)**. Here, you will find information on upcoming events, breathtaking articles on what's happening in orchestra, and a forum to discuss topics with your fellow orchestra members.

The following handbook provides you with basic information vital to being a contributing member of this ensemble. In it, you will find:

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Please take the time to peruse all the information provided for you in this handbook. It will improve your playing, increase your contribution, and expand your mind. You'll laugh, you'll cry, you'll hold your breath until your face turns blue. Enjoy!

## PRACTICING

Every since you first picked up your stringed instrument and learned how to squeak out “Mary Had a Little Lamb,” you’ve heard the word “*Practice*.” But why? And how? Glad you asked.

### Why should I practice?

“Practice makes perfect.” Bull-hockey. Practice makes improvements, but that doesn’t sound as cool. Honestly, practicing can be hard because you often don’t see a lot of results in one practice session. It’s consistent, focused practice that actually gets steady results. Hopefully, you’re in high school orchestra at least in part because you want to get better at playing your stringed instrument. Well, practicing on a regular basis is what will get you moving in the right direction. You’ll also realize that there is no pinnacle; there’s always something new to learn and something to improve. That’s why music is a lifelong interest for so many people.

### How do I make myself practice more?

Generally, the two biggest obstacles to practicing are time and motivation.

**1. Time.** High school students are generally very busy, particularly the type of intelligent, active students that tend to participate in orchestra. Time management becomes a big issue: you have to make time to practice.

Set priorities. There’s never enough time in a day to do everything you need and want to do. Is improving on your instrument important to you? Hopefully, it is.

Set up a schedule for yourself. Make practicing a part of your daily routine. Orchestra has homework like any other class: practicing. Make it a part of your homework time. It’s usually the most fun part of your homework, anyway.

Set up expectations. “No excuses: 30 minutes every day.” “No TV or video games until I’ve practiced.” “If I can bow this passage correctly by the time I finish, I get a cookie.”

Finding time to practice can be difficult, especially considering the number of activities and interests that pull you in one direction or another. If you only practice “when you have time,” then it will rarely happen. Deliberately make it part of your routine. Remember, though, that it needs to be realistic, or you’ll just end up frustrated.

**2. Motivation.** Sometimes it’s hard just to get motivated to practice. When you’re tired, not feeling well, busy, or would rather be doing other things, it’s easy to just blow it off. That quickly becomes habit, and soon you’re *never* practicing.

Create a practice environment. Take your instrument home every day, even if you don’t think you’ll have time to practice. Make it part of your habit. Have a music stand set up in your room, reminding you to practice. Turn off the TV and radio, so that you’re not distracted and more able to focus.

Set practice goals. If you have something to work for, you’re more likely to actually practice.

Other factors: *Private lessons* can be a great practice motivator. You have individual accountability when you know your instructor will hear you play by yourself each week. You will also get a greater variety of music, including some great solo repertoire. A *higher quality instrument* can also motivate you to practice more. A superior instrument makes you sound better, and you’ll like listening to your improved sound on your “new toy.” (Also, try naming your instrument based on its “personality”)

\*\*\*The key to practicing is making it part of your routine. Once practicing is a habit, you’ll begin to see results in your playing.\*\*\*

So now you should be able to set up a regular practice schedule for yourself. You've finally got some time alone, just you and your instrument. Now what do you do? Great question.

### **What should my practice session look like?**

Don't just get out your instrument, play some music, goof off a little, then pack up. Maximize your practice time. You can divide your session into the following sections:

**1. Scales.** It's always a good idea to start off your practice session with a scale. Memorize your scale and fingerings, so you can focus on your posture, how you hold your bow and instrument, tone production, and intonation. When reading difficult music or rhythms, it's easy to ignore the basics. Scales give you that opportunity. Besides, music is based on scales, so the better you can play your scales, the better you'll be able to play music. You can also vary your scales with different bow styles (e.g. spiccato, martele).

**2. Technique/ etudes.** Etude literally means "study." It is a written exercise that focuses on improving a specific aspect of playing your instrument. It can be shifting, a certain bowing style, trills, or any number of other issues. Class technique books have some etudes and technical studies, but most will come from a private instructor. This time in your practice session can be used to deal with an issue you would like to improve in your own playing.

**3. Repertoire.** This is the entrée of your practice meal. It can include any music you are currently working on: orchestra music or solo literature that you are learning. Don't waste time playing straight through all of your music, though. Plan your session so that you actually improve.

Practice what's difficult. It's a lot more fun to play what we can already play well. It also makes you feel good about your playing. However, it doesn't help much. Spend your time working on what you can't play as well, even though it's sometimes more frustrating. If you keep working at it, you soon will be able to play it and feel even better about yourself. (HINT: mark your music by lightly putting brackets around the lines you need to work on. Then you won't waste time later trying to figure out which sections you need to practice)

Practice with a plan. If you have difficulty getting through an entire passage, break it up into more manageable chunks. Once you can play them individually, put the section back together. If you have difficulty playing a fast passage, slow it down. Using a metronome, play it at a manageable tempo, go back, and try to play it slightly faster. Keep increasing the tempo until you start having trouble, then stop. Come back to it tomorrow, and you'll be able to get to a faster tempo. If you have difficulty with just one aspect of a section (e.g. bowing), isolate that problem. Fix it by itself, then put it back into context. Get creative in fixing spots.

Keep it interesting and fun. When playing a passage repeatedly, try different rhythms and bowings to keep your brain interested. If you start to get frustrated with yourself (or the music), walk away. Come back to it later. You won't learn anything when you're upset. When you return to that section or issue, try approaching it with a different plan.

If you know what and how to practice your repertoire, your practice will be much more beneficial.

**4. Something Fun.** End your practice session with something you enjoy. It can be playing by ear, writing your own music, playing with the radio, improvising, or playing some of your favorite tunes. This gives you something to look forward to and can often improve your playing, as well.

\*\*\*"Practice smarter, not harder." It's a cliché, but it's true. If you've got an intelligent plan, you can get much more out of your practice session.\*\*\*

## REHEARSAL PROCEDURES

*Rehearsal time is essential to an orchestra's progress. It is time for the group to improve as an ensemble. The better rehearsal time is utilized, the better the entire orchestra will be. The following is information every orchestra member should know about how to make the most of rehearsal time.*

**Be On Time.** "If you're on time, you're late." Rehearsal time is a premium, often selling for thousands of dollars per minute on the black market. If you are not set up, tuned, and ready to participate when the rehearsal begins, it costs the entire ensemble.

**Be Prepared.** Have your materials every time. It wastes time if you have to look for a pencil, a technique book, or music. Don't rely on your stand partner to have your materials, either. Keep them all on the stand, organized and ready to use. You must also be musically prepared for rehearsal. Rehearsal time is most efficient and interesting when spent on developing musical ideas and ensemble work. A conductor shouldn't have to help you learn notes and rhythms. Start practicing your music as soon as you get it.

**Be Respectful.** Respect your director, others in the ensemble, equipment, the facilities, and the process. Appropriate rehearsal etiquette makes the rehearsal process more productive and fun. If you prefer playing great music than getting screamed at by your director, then learn how to act in rehearsals. When other sections are being rehearsed, sit quietly and listen; what the conductor is telling one section of the orchestra probably also relates to you. Avoid plucking and talking, and listen to directions. Respect is two-way: if you are respectful, you will get respect.

**Know Your Role.** Each member of the orchestra has an important role to play. Section leaders do just that: they lead the section. That means making sure the section is on task, has all fingerings and bowings, and is ready for all entrances. The members of that section must respect the role of section leader, and watch the section leader along with the director to make sure the entire section is together, as well as playing in the same part of and using the same amount of bow. Your role as an orchestra member also includes taking copious notes. Any bow changes, fingerings, or directions given to you by the director or section leader should be immediately written in your part in pencil.

*Rehearsals don't have to be boring or tedious. Simply by orchestra members following rehearsal procedures, several things will happen. You'll get to play more, directions won't need to be repeated, the director will be in a better mood, and the orchestra will sound better! It's all in your hands.*

## TUNING YOUR INSTRUMENT

*Are you in tune? A lot of players don't really listen to themselves when they play. The first step to learning to play in tune is getting your instrument in tune. As your ear becomes more honed to hearing pitch differences in the tuning process, your intonation will improve as a whole.*

- 1. Listen to the reference pitch.** Get the tuning pitch in your head before trying to match it. Once you have the pitch clearly in your ear, play your own string.
- 2. Determine the relative pitch of your string.** Is it sharp, flat, or correct? If you can't tell, make an educated guess. If you start adjusting and it gets worse, you're going the wrong way (start by going down; that way you won't break a string by going too high).
  - 3a. Adjust fine tuner.** Turn it clockwise to raise the pitch and counter-clockwise to lower it. Try to do this while still playing, so you can hear when your pitch matches the reference pitch.
  - 3b. Adjust peg.** If you get to one extreme or another on your fine tuner and can't go any further, you'll need to adjust your peg. Loosen your fine tuner and set your instrument so that you can pluck the string with one hand while turning the peg with the other. That way you'll know when you are close to the pitch. If it's flat, start by coming down, then go up. When you're close, you can finish by using the fine tuner.
- 4. Play double stop open strings.** Play the open A with the open D. Since you're A should already be in tune, adjust your D string until it creates the open Perfect 5<sup>th</sup> sound with the A. Bass players can use the harmonic on both strings to match pitch.
- 5. Repeat steps 2-4 with each string.** Your instrument should now be in tune!

### ***TUNING HINTS:***

**Tone.** Start upbow softly, using long, even tones and keeping the same dynamic. This will keep your pitch steady and easier to hear if it matches the reference pitch.

**Finger roll.** If you're having trouble determining whether your pitch is sharp or flat when tuning by 5<sup>th</sup>s, roll your finger from against the nut up each string until sounds in tune. If you have to roll your finger along the bottom string, then it is flat. If you must roll your finger along the upper string, then the bottom string is sharp. Adjust your string accordingly.

**Quality equipment.** It is easier to hear pitch on a quality instrument with quality strings. As strings get older, they start to lose their tone, and become more difficult to tune. Be sure to change strings regularly.

*Playing in tune is an essential part of playing in orchestra, and becomes more important as your playing level progresses. Playing in tune is impossible if your instrument is out of tune. Take the tuning process seriously and as your ability to hear pitch develops, your intonation, as well as that of the orchestra, will improve.*

## INSTRUMENT CARE

*Your instrument is your baby. It should have a name. You should also take very good care of it. Some of this may seem like common sense, but you never know.*

### The Case

- ♪ When not in use, keep the instrument in its case. Hanging from the shower rod: not a good idea.
- ♪ Never force the case closed. If you have to force it shut, something's wrong. Fix it, don't make the problem worse by breaking something.
- ♪ Do not keep music, programs, or liquid polish inside the case. Or gum.
- ♪ Remove shoulder pad before placing in case. Duh.
- ♪ Vacuum case periodically to remove rosin particles. You're a slob and we all know it.

### The Instrument

- ♪ Do not expose instrument to extreme heat, cold, dampness, or dryness.
- ♪ Do not leave your instrument in the car. Especially in summer and winter, if you go inside, take your instrument with you. Set it in the seat next to you.
- ♪ Handle instrument at its neck and chinrest or endpin. You don't want someone picking you up by your hair: don't pick your instrument up by the strings.
- ♪ Check regularly the position and angle of the bridge. If bridge does not stand at right angle to top of instrument (i.e. leaning slightly towards tailpiece), ask instructor or instrument repair person to adjust.
- ♪ Wipe rosin and perspiration from instrument with a soft cloth after each use.
- ♪ If you notice a crack in the instrument or the soundpost has fallen down:
  1. Do not play on the instrument.
  2. Loosen pegs to reduce string tension at once.
  3. Take instrument to a qualified string repair person as soon as possible.
- ♪ Always keep an extra set of strings as replacement for broken or worn strings.

### The Bow

- ♪ Tighten bow to playing tension, careful to maintain the inward curvature of the stick. If it curves outward, you're trying to make it into the wrong kind of bow.
- ♪ Loosen hair sufficiently to release tension on stick when not in use.
- ♪ Do not touch bow hair; natural skin oils will make the hair slick and resistant to rosin. I know it looks pretty and smooth, but hands off.
- ♪ Apply rosin by "bowing" firmly and slowly on rosin cake. A little rosin applied regularly is better than a lot of rosin applied infrequently. It's like eating; have some food every day and don't pig out.
- ♪ Do not drop, wave, or lean on bow. It's not a cane or a sword.
- ♪ Have bow rehaired at least once a year or when bow hair becomes worn or broken.

*Knowing how to care for your instrument can increase its longevity and value over time. Treat it well and it may do the same for you.*

## BOWING TECHNIQUE

***Dynamics** (the relative loudness or softness of music) and **Tone** (the quality of the sound) are both results of right hand bow technique. Both are affected by basic bow technique, as well as three variables: bow placement, bow weight, and bow speed.*

### Basic bow technique

1. **Bow grip-** The tip of the thumb should be placed against the stick of the bow next to the frog with the thumb curving outward. The fingers should hang down around the stick of the bow, gripping with the knuckle, not the fingertip. On violin and viola, the pinky should be curved and rest atop the bow stick.
2. **Bow stroke-** The bow stroke should run parallel to the bridge. In long bow strokes, use full bows, using the wrist to keep the bow straight and change bows smoothly.
3. **Bow tilt-** The fullest sound is created by putting the most bow hair on the string at once. The stick of the bow should be directly above the hair, creating “flat hair,” more pressure control, and a fuller sound.

### Bow placement

The placement of the bow on the string dictates both tone and dynamic. Playing closer to the bridge will create a bigger, louder sound (see basic bow technique for straight bow stroke and flat hair). Likewise, playing further from the bridge (closer to the fingerboard) will create a lighter, softer sound. Bow placement should be used in tandem with appropriate weight and speed.

### Bow weight

Bow weight, used in collaboration with bow placement, controls tone and dynamic. More weight should be used when playing close to the bridge, creating a bigger tone and louder dynamic. Less weight should be applied when playing further from the bridge for softer passages.

### Bow speed

The speed of the bow across the strings also helps tone and dynamic. Generally speaking, greater bow speed should be used with more pressure closer to the bridge, and less bow speed with less pressure further from the bridge. There are exceptions, however.

***Flautando**, a bowing style for a softer dynamic, is played over the fingerboard with little pressure, but a lot of bow speed. This creates a flute-like soft dynamic effect.*

*Right hand bow technique is a very important element of string playing that is often ignored. Right hand technique is as important as left hand technique and should receive equal attention. Spend some time in your practice sessions focusing solely on your bow technique. A quality bow can also make a tremendous difference in one's playing. Go take a few hand-made wooden bows for a test drive.*

## BOWING STYLES

### Legato

Legato bowing is the basic “smooth and connected” stroke that consists of two parts: the **∨ (Up Bow)** and the **▮ (Down Bow)**. During a down-bow the frog moves farther away from the strings. In an up-bow the frog moves closer to the strings. The bow change (from one bow to the next) should be done in a smooth motion so that there is no gap, or silence between them. The down-bow is naturally stronger in sound than the weaker up-bow, and you should attempt to balance them so that you can't hear the difference between them. Legato is often used when more than one note will be played within a single bow under a slur.

### Détaché

Détaché bowing is the basic stroke where notes are taken one per bow. The production of sound should be seamless between each note. There may sometimes be a slight separation from one note to the next, or articulation (accent) on each note. The bow stroke can be represented with a line which appears above or below each note, meaning **tenuto**, or fully sustained.

### Martelé

Martelé bowing (meaning “hammered” in French) is represented by an arrowhead or a dot (depending on the composer) above or below the note. To create this forceful, abrupt sound, apply weight into the bow with the right arm and index finger, then simultaneously release the weight and move the bow across the string. Just as quickly, stop the bow and re-apply weight, *keeping the bow on the string* at all times. This can be practiced in all parts of the bow (frog, middle, point).

### Staccato

Staccato is a short, stopped bow stroke. It is played on the string and is marked in music with dots above or below the notes. Like the martelé bow stroke, this can be played in all parts of the bow, but is generally easiest to control in the lower to middle part.

### Spiccato and Sautillé

**Sautillé** is a bounced stroke, indicated with dots, performed at quick tempos in the middle of the bow. The bow stays quite close to the string, yet bounces slightly off with each stroke. This is used for rapid passages where each note is bowed separately. **Spiccato** is the same stroke, similarly marked, though usually a slightly slower more controlled stroke is used. To play spiccato, find the balance point on the bow (approx. 1/3 from the frog), and let the bow bounce in tempo with a natural, controlled stroke.

### Loure

In this stroke, several notes are separated within a slur by a very slight pause in the bowing, or a re-accentuation of each note. This stroke is done without changing the direction of the bow.

### Specialized bowing styles

**Tremolo** is a rapid reiteration of a single pitch. To play tremolo, repeat your bow stroke as quickly as possible, using little bow. It is most effective when the wrist is used to change bow direction, rather than the arm. Tremolo is easiest in the middle to upper part of the bow and can be played with various dynamics. Tremolo is usually notated with three slashes through the stem of the note(s).

**Col legno** is a unique sound created by striking the stick of the bow against the string. To play col legno, turn the bow upside down so that the wood part of the bow is facing down towards the strings. Strike the bow against the string in a bouncing up and down stroke.

**Ricochet** is accomplished by throwing the upper third of the bow (while drawing a down-bow) on the string and allowing it to bounce so that a rapid series of notes are produced. It is used most commonly for 3 to 4 notes, but can be used to play more than 10 notes in a single stroke.



## SHIFTING TECHNIQUE

*By the time you get to high school orchestra, you should be comfortable with shifting. Being able to play in several positions means greater facility in certain passages and increased range on your instrument. The following concepts and exercises will help ensure that your shifts are accurate.*

### 1. Start with correct left hand position

*Violin and viola-* Your wrist should be straight and your thumb pointed upward against the side of the neck, supporting your hand position. Your hand should be relaxed, not gripping the neck like you're choking the life from it.

*Cello and bass-* Your elbow should be up and your thumb pointed in towards the back of the neck. Your hand and arm should be relaxed, not gripping the neck like it's a weapon.

### 2. Shift correctly

You want your shift to be smooth, fluid, and in tune. Work slowly on making the following three steps occur correctly, then work toward making the shift one fluid motion.

**Release-** Release the pressure of your finger on the string, but keep the finger in contact with the string.

**Shift-** Move the hand as whole to the arrival point. The hand should stay in posture as a unit: *don't* move the finger up *then* drag the thumb along behind.

**Arrive-** Stop the shift motion and lightly re-apply the pressure to the string with your finger.

**\*The Hand-** Keep your fingers curved during the shift. Don't change your left hand position just because it's moving. The thumb is the anchor for your position. It should always support your hand and fingerings for whatever position you're in.

*Violin and viola:* when shifting to positions higher than 5<sup>th</sup> position, slide the thumb off the side of the neck and underneath to provide an anchor for your higher position work. Bring your elbow underneath the violin to help your fingers reach the node-bleed notes.

*Cello and bass:* when shifting higher than 5<sup>th</sup> position release the thumb and place it on the string a whole step away from your first finger. This will help give stability to the hand as you continue to move up the fingerboard.

**\*The Bow-** Lessen the pressure on the bow as you are making the actual shift, so as not to "meow" when shifting. In most instances, the shift should be as inaudible as possible.

### 3. Know where you are shifting to

Envision exactly where your finger will go, don't guess. Think about the distance between your starting location and where you will arrive.

**Exercise 1-** For smaller shifts, practice hearing the two pitches without a shift, then make it sound the same with the shift. For example, if you are shifting on the A string from B in 1<sup>st</sup> position up to D, first play the two notes, staying in first position: B-D. Then play them with the shift in between and see if you can make them sound exactly the same: B-(shift)-D.

**Exercise 2-** For larger shifts, think about where your "anchor" finger will go. First practice the shift by moving to and playing the "anchor" note, then placing down the finger that plays the actual arrival pitch.

*Most literature at this level will involve shifting. The more comfortable and confident you are in your shifting, the more you will be free to use the best fingering for every passage, increase your instrument's range, and enhance your playing ability.*

## VIBRATO EXERCISES

Vibrato is a fluctuation of a pitch to “warm up” the sound. Though arm, wrist, and finger vibrato are all used, wrist vibrato is most widely used. Vibrato is an essential part of a mature string sound, but can be difficult to incorporate into your playing. Violin and viola vibrato is generally considered more difficult than cello and bass vibrato. Try these exercises to help develop your vibrato.

### 1. Finger flex:

Dangle finger index loosely. Place tip of finger in the crease of the thumb without pressing down. Flex the knuckle back and forth rhythmically.

### 2. Basic motion:

*Violin/Viola:* Hold up left arm with hand facing you. Without moving the arm, use the wrist to wave to yourself. “Hi, me!” Try filling an empty film canister with dry rice and shake it towards and away from yourself with your wrist, listening to the rice to ensure rhythmic stability.

*Cello/Bass:* Hold up your left arm with the elbow pointed out. Rotate the entire arm (not just the wrist) like you’re shaking a can of soda.

### 3. Finger tap:

A) Using your instrument in playing position, anchor your thumb under the heel of the neck. Curve your fingers and, with the basic vibrato motion, gently tap the right side of the instrument rhythmically. *Violin/Viola: Be sure you are moving only at the wrist.*

B) Repeat part A, but, with the thumb still anchored, reach over and tap on the left side of your instrument.

### 4. String polish:

A) Slide your 2<sup>nd</sup> finger along each string up and down the fingerboard. *Violin/Viola: Again, make sure your wrist is creating this motion.*

B) Repeat part A, but keep your thumb “glued” to the side of the instrument.

C) Repeat part A, but keep your thumb AND 3<sup>rd</sup> finger “glued” down. Slide your 2<sup>nd</sup> finger toward and away from your 3<sup>rd</sup> finger, still using only your wrist (*Violin/Viola*).

### 5. Wa-wa finger slide (*violin and viola*):

Place your 3<sup>rd</sup> finger on the D string and play the G pitch. Using your wrist, move your third finger up a half step to G-sharp. Still using the wrist, move the 3<sup>rd</sup> finger back to G. Repeat, gradually increasing speed to create a half step “wa-wa” slide between the two pitches.

*Make sure you are using only your wrist to create this effect.*

### 6. Vibrato practice:

Play simple tunes or even a scale slowly. Focus on vibrating on each note, using the wrist to rock the finger back and forth (toward and away from you, not side to side). Keep your vibrato even and relaxed. If you have trouble keeping your instrument up, place a cloth around the scroll and prop it gently in a corner for support. Cello and bass players can prop their elbow against a wall to practice rotating the arm.

*Begin incorporating vibrato into your playing as much as possible. It will most likely seem awkward at first, but the more you do it, the more natural it will become. As you become more advanced, you will learn to vary your vibrato according to the dynamic and style of music you are playing.*

## BASIC MUSIC THEORY

*The music that we play is based on musical systems. In tonal music, those systems include scales and key signatures. The more you understand the theory behind the music we play, the better your understanding will be of the music itself. Tonal music usually uses key signatures to tell the musician what scale the music is primarily based on. Each key signature has 2 possibilities: major or minor. We'll start with the major keys.*

### Major keys

Sharps- Up to 7 sharps are possible in a key signature. They always appear in the same order: F#, C#, G#, D#, A#, E#, B#. Think “Fat Cats Go Diving And Eventually Bellyflop.” To determine what major key a piece with sharps is in, take the last sharp in the key signature and go up a half step.

(0# = C major)

1# = G major (F#)

2# = D major (F#, C#)

3# = A major (F#, C#, G#)

4# = E major (F#, C#, G#, D#)

5# = B major (F#, C#, G#, D#, A#)

6# = F# major (F#, C#, G#, D#, A#, E#)

7# = C# major (F#, C#, G#, D#, A#, E#, B#)

Flats- Up to 7 flats are possible in a key signature. They always appear in the same order: Bb, Eb, Ab, Db, Gb, Cb, Fb. That's exactly the reverse of the order of sharps.

To determine what major key a piece with sharps is in, look at the next to last flat key signature. That's the name of your key.

(0b = C major)

1b = F major (Bb)

2b = Bb major (Bb, Eb)

3b = Eb major (Bb, Eb, Ab)

4b = Ab major (Bb, Eb, Ab, Db)

5b = Db major (Bb, Eb, Ab, Db, Gb)

6b = Gb major (Bb, Eb, Ab, Db, Gb, Cb)

7b = Cb major (Bb, Eb, Ab, Db, Gb, Cb, Fb)

Scales- Each of these keys is based on a scale. Every major scale has the same pattern of whole and half steps: WWHWWWH. The sharps and flats of a key signature raise and lower the pitches in the scale so that the key (the pitch you start on) maintains that pattern. From one pitch to the next of the same name (one octave), there are 8 steps (including the starting and ending pitches) in a major scale. The C major scale (no sharps or flats) is spelled out as follows (tired of parentheses yet?): CDEFGABC. In case you haven't noticed by now, every ascending major scale simply goes in alphabetical order, starting over at A again after G. The charts above should now tell you where to place the sharps or flats for each scale.

## Minor keys

Every major key has a relative minor key. A relative minor is a key that shares the same sharps or flats in the key signature as its relative major. To find a relative minor, go down a minor third down from the major key (or find the 6<sup>th</sup> scale degree of the major key). Be careful, though: the name of the relative minor must be 2 letter names away. For example, the relative minor of A major is F# minor, not Gb minor. To find the relative major of a minor key, do the reverse. Go up a minor third (or find the 3<sup>rd</sup> scale degree of the minor key) from the minor key, again careful to arrive 2 letter names away.

### Sharps

(0# = A minor)

1# = E minor (F#)

2# = B minor (F#, C#)

3# = F# minor (F#, C#, G#)

4# = C# minor (F#, C#, G#, D#)

5# = G# minor (F#, C#, G#, D#, A#)

6# = D# minor (F#, C#, G#, D#, A#, E#)

7# = A# minor (F#, C#, G#, D#, A#, E#, B#)

### Flats

(0b = A minor)

1b = D minor (Bb)

2b = G minor (Bb, Eb)

3b = C minor (Bb, Eb, Ab)

4b = F minor (Bb, Eb, Ab, Db)

5b = Bb minor (Bb, Eb, Ab, Db, Gb)

6b = Eb minor (Bb, Eb, Ab, Db, Gb, Cb)

7b = Ab minor (Bb, Eb, Ab, Db, Gb, Cb, Fb)

### Scales

**Pure minor**- Otherwise known as natural minor, the pure minor scale is simply the minor scale with no accidentals or alterations. The 3<sup>rd</sup>, 6<sup>th</sup>, and 7<sup>th</sup> scale degrees are a half step lower than its **parallel major**\* (see below).

**Harmonic minor**- This is the pure minor scale with a raised 7<sup>th</sup>. This creates an augmented 2<sup>nd</sup> between the 6<sup>th</sup> and 7<sup>th</sup> scale degrees for a unique sound.

**Melodic minor**- Melodic minor is different ascending than it is descending. The ascending melodic minor scale is the pure minor with raised 6<sup>th</sup> and 7<sup>th</sup> scale degrees. Descending is pure minor with no alterations.

*\*Parallel minor*- Don't confuse parallel minor with relative minor. Parallel keys share the same tonic. In other words, the scales start and end on the same pitch. C major and C minor are parallel keys, as are F major and F minor, etc. The parallel minor of any major key has a lowered 3<sup>rd</sup>, 6<sup>th</sup>, and 7<sup>th</sup> scale degrees. E.g. While C major has no flats, C minor has (in scale order) Eb, Ab, and Bb: the 3<sup>rd</sup>, 6<sup>th</sup>, and 7<sup>th</sup> steps of the scale.

## Other theory to know

### Alternate scales

**Pentatonic**- A scale consisting of 5 pitches and containing no half steps. e.g. CDEGA

**Whole tone**- A scale consisting only of whole steps. e.g. CDEF#G#A#

**Chromatic**- A scale consisting of all half steps. e.g. CC#DD#EFF#GG#AA#B

### Accidentals

An accidental adds a pitch not in the key signature or cancels out a pitch that is in the key signature.

**Sharp**- #, raises the pitch one half step

**Flat**- b, lowers the pitch one half step

**Natural**- ♯, cancels out a sharp or flat

**Double sharp**- x, raises the pitch one whole step

**Double flats**- bb, lowers the pitch one whole step

### Enharmonic spellings

In equal temperament (all half steps tuned the same distance apart), there are multiple ways to spell a given pitch. Think of a piano keyboard. Any given black key is a half step up from the white key to its left and a half step down from the white key to its right. So the black key between F and G could be called either F# or Gb. Enharmonic spellings are just ways of renaming a note by using sharps or flats from its neighbor pitch.

### Time signatures

The time signature tells you the meter of any given measure. From this, you can figure out the best way to count the beats and most likely how the director will conduct the metric pattern. Remember, though, that the time signature may change from measure to measure. This is called **mixed meter**.

**Top number**- How many counts per measure.

**Bottom number**- What type of note receives one count.

1=whole note, 2=half note, 4=quarter note, 8=eighth note, 16=sixteenth note

*Knowledge of basic music theory is essential to your understanding how music functions. Since most music is based on some type of scale, the better you understand the theory behind those scales, the better you can play the music. Be sure you think about the key signature and the scale it's based on before starting any piece of music.*

## BASIC MUSIC HISTORY

*An understanding of music history is critical to understanding how to play a piece of music. Bowing styles, tempos, and dynamics all vary from one period to the next. Your ability to play the music with the composer's intent increases by knowing about the stylistic implications of that composer or period.*

### Baroque (1600-1750)

The Baroque period followed the Renaissance, bringing more elaboration to both art and music. Baroque music is often about contrast: between instruments, solo vs. tutti, dynamics, tempos, and style.

#### Important composers

Pachelbel, Vivaldi, J.S. Bach, Handel

#### Style

**Bowing-** In quick tempos, the “running notes” (16<sup>th</sup>s in 4/4, 8<sup>th</sup>s in 2/2) should be played détaché and “walking notes” (8<sup>th</sup>s in 4/4, quarters in 2/2) should be played martelé.

**Dynamics-** Since there was not formal notation for a lot of dynamics, they were often improvised by performers. Terraced dynamics (jump from one dynamic level to another) were frequently used since the crescendo and decrescendo were not a formal practice yet.

**Features-** *Ornamentation*, including trills, appoggiaturas, turns, and glissandos, was also often improvised by performers. The purpose of ornamentation is just that: to ornament and elaborate on the notes.

### Classical (1750-1820)

Music in the Classical period focused on form. Sonata forms, with an exposition, development and recapitulation, were quite common and featured a contrast between two key centers. Symphonies and string quartets became popular ensembles for compositions.

#### Important composers

Haydn, Mozart, Beethoven

#### Style

**Bowing-** A lot of music from this period, particularly in faster tempos, has a light, clean sound. In quick tempos, eighth notes should usually be played spiccato. Quarter notes should be played with a slight separation between each note.

**Dynamics-** The crescendo and decrescendo, now notated in music, were often used to get from one dynamic level to another.

**Features-** *Syncopation* is frequently used in music from this period and should be played with separation between all notes and emphasizing the longer ones. *Grace notes* are generally performed on the beat and slur into the written note.

## Romantic (1820-1900)

The Romantic period focused on emotion in art. During this era, expression became more important than form. Many composers used music to express pride in their heritage, to convey images or stories, or to achieve an emotional objective.

### Important composers

Late Beethoven, Schubert, Schumann, Mendelssohn, Brahms, Tchaikovsky, Dvorak

### Style

**Bowing-** Heavier bow strokes and longer phrases became more prominent in this period. Accents should be played with a very heavy, hammered quality.

**Dynamics-** Dynamics grew wider in range in this period. Because of larger orchestras and alterations to instruments, bigger dynamic contrasts were possible.

**Features-** Vibrato is an important part of music from the Romantic period. It should vary according to the tempo and intensity.

## Modern (1900-present)

The Modern era began to see the limitless exploration of musical possibility. This era began to see deterioration of tonality and regular meter as necessities in music. While some music still had a definite key and regular meter, other pieces explored atonality and irregular meter, as well as abandoning other common musical practices.

### Important composers

Stravinsky, Shostakovich, Schoenberg, Vaughan Williams, Barber, Copland, Holst

### Style

**Features-** Since so many styles and types of music are possible in this period, composers use precise notation to indicate how they would like their works performed. Extensive composition notes, as well as detailed dynamics, articulation markings, and expression markings are used to specify the style in which a work should be performed. Pay close attention to all markings to emulate the desired musical effect.

*Music from different periods is stylistically quite varied. The more you know about who wrote each work and the overall stylistic concerns of the period in which they composed, the more you'll understand and appreciate the music you play.*

## GLOSSARY OF TERMS

- Accelerando:** Gradually increase the pace, speed up  
**Accent:** Stress the note more than usual  
**Accidental:** Sharp, natural or flat not in the key signature  
**Adagio:** Slow tempo  
**Allegro:** Fast tempo  
**Andante:** Moderately slow, walking tempo  
**Arco:** Bow, play with the bow  
**Arpeggio:** Notes of a chord played in succession  
**Cantabile:** In a singing manner  
**Chord:** A group of notes played simultaneously  
**Coda:** Tail, extra section added to the end of a piece  
**Col legno:** Strike with the wood of the bow  
**Common time:** 4/4  
**Crescendo:** Gradually increase the volume, get louder  
**Cut time:** 2/2  
**Da Capo (D.C.):** To the top, go back to the beginning  
**Dal Segno (D.S.):** To the sign, go back to the marked in the music  
**Decrescendo:** Gradually decrease the volume, get softer  
**Détaché:** Detached, slight separation between notes  
**Diminuendo:** Gradually decrease the volume, get softer  
**Divisi:** Divide the part between players  
**Dolce:** Sweetly  
**Ensemble:** Together, a group of performers  
**Expressivo:** Play in an expressive manner  
**Fine:** End  
**Grave:** Slowly and solemnly  
**Harmonic:** Touch the string lightly to produce a pure tone  
**Interval:** The space or distance between two notes  
**Key signature:** Pattern of sharps or flats at the beginning of a staff that indicates the pitches to be consistently lowered or raised  
**Largo:** Very slow, broad  
**Legato:** Smooth and connected  
**Marcato:** Marked, prominent  
**Martelé:** Hammered, strongly accented  
**Meno:** Less  
**Mosso:** Motion, movement  
**Mezzo:** Half  
**Moderato:** Moderate tempo  
**Morendo:** Dying away  
**Pesante:** Heavily  
**Pizzicato:** Pluck the string  
**Piu:** More  
**Poco a poco:** Little by little



**Presto:** Very fast tempo  
**Rallentando:** Gradually decrease the pace, slow down  
**Ritardando:** Gradually decrease the pace, slow down  
**Sempre:** Always, continue in the same manner  
**Sforzando:** A heavy accent  
**Slur:** Two or more notes of different pitch played in the same bow  
**Soli:** Section has the melody; play out  
**Solo:** Play with one instrument  
**Spiccato:** Bouncing off the string  
**Staccato:** Short and on the string  
**Subito:** Suddenly  
**Sul ponticello:** Over the bridge  
**Tempo:** Speed or pace of the music  
**Tenuto:** Fully sustained  
**Tie:** Two or more notes of the same pitch played in the same bow  
**Time signature:** Numbers at the beginning of the staff representing the meter  
    Top number = Number of counts per measure  
    Bottom number = Type of note that receives one count  
**Tremolo:** Rapid reiteration of a single pitch by moving the bow back and forth  
**Trill:** Rapid alternation of a pitch with the one above it  
**Tutti:** All, the entire section or ensemble  
**Vivace:** Lively