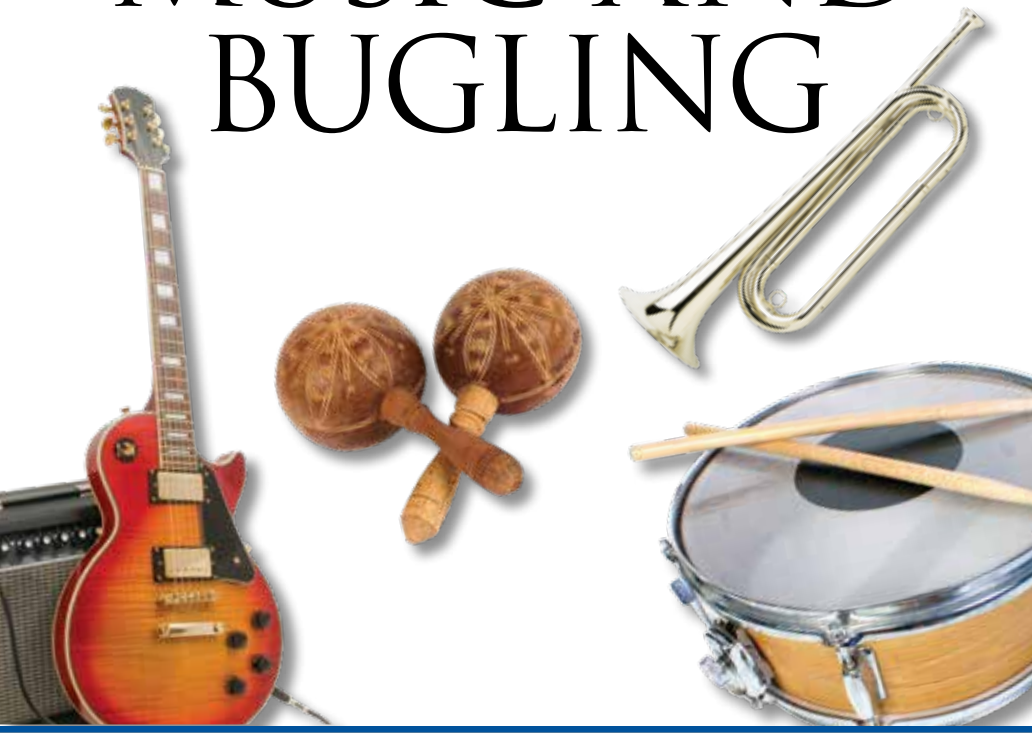
MERIT BADGE SERIES

MUSIC AND BUGLING



Scouting America

How to Use This Pamphlet

The secret to successfully earning a merit badge is for you to use both the pamphlet and the suggestions of your counselor.

Your counselor can be as important to you as a coach is to an athlete. Use all of the resources your counselor can make available to you. This may be the best chance you will have to learn about this particular subject. Make it count.

If you or your counselor feels that any information in this pamphlet is incorrect, please let us know. Please state your source of information.

Merit badge pamphlets are reprinted annually and requirements updated regularly. Your suggestions for improvement are welcome.

Who Pays for This Pamphlet?

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SCOUTING AMERICA
MERIT BADGE SERIES

MUSIC AND BUGLING

"Enhancing our youths' competitive edge through merit badges"

Scouting America

Requirements

Always check scouting.org for the latest requirements.

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MUSIC

Music, Music, Music!

Music is woven into life, from the lullaby of your earliest memories to the music you enjoy today. A person walking alone and whistling or singing is making music. Many people hear the sounds in nature—wind in trees, flowing water, birdsong, a coyote's howl—as a kind of music. Nature's sounds and even its silences have inspired people to make music. Composers have translated the sounds of industry and busy cities into music, too.

You can earn the Music merit badge with or without playing an instrument or taking lessons. Either way, this pamphlet will help you get your musical bearings and choose your direction.

The history of music is rich and exciting. Through the ages, new music has been created by people who learned from tradition, then explored and innovated. All the great music has not yet been written. Today, the possibilities for creating new music are limitless.

What to Play?

Be sure to choose an instrument you will enjoy. You should like its sound, and the action of playing it—fingers on keys, a bow on strings—should appeal to you. Maybe you see yourself playing trombone in a marching band, playing guitar in a rock band, or trying out new pieces by yourself on the piano.

Your singing voice is an instrument, too. If you choose vocal instruction, you could become a member of a chorus or choir at school or your place of worship, or start your own singing group.

Buying an Instrument

Before buying an instrument, ask the advice of your music instructor or a friend who is an accomplished musician. They should know about the quality, cost, and the most reliable places to buy musical instruments. Expert advice can save you time, money, and disappointment.

Some instruments, such as a new piano, are costly, but music dealers also offer rentals and payment plans. Secondhand and "school" instruments (instruments designed for beginners) also will cost less. If you are shopping for a used instrument, ask if the dealer offers a guarantee.

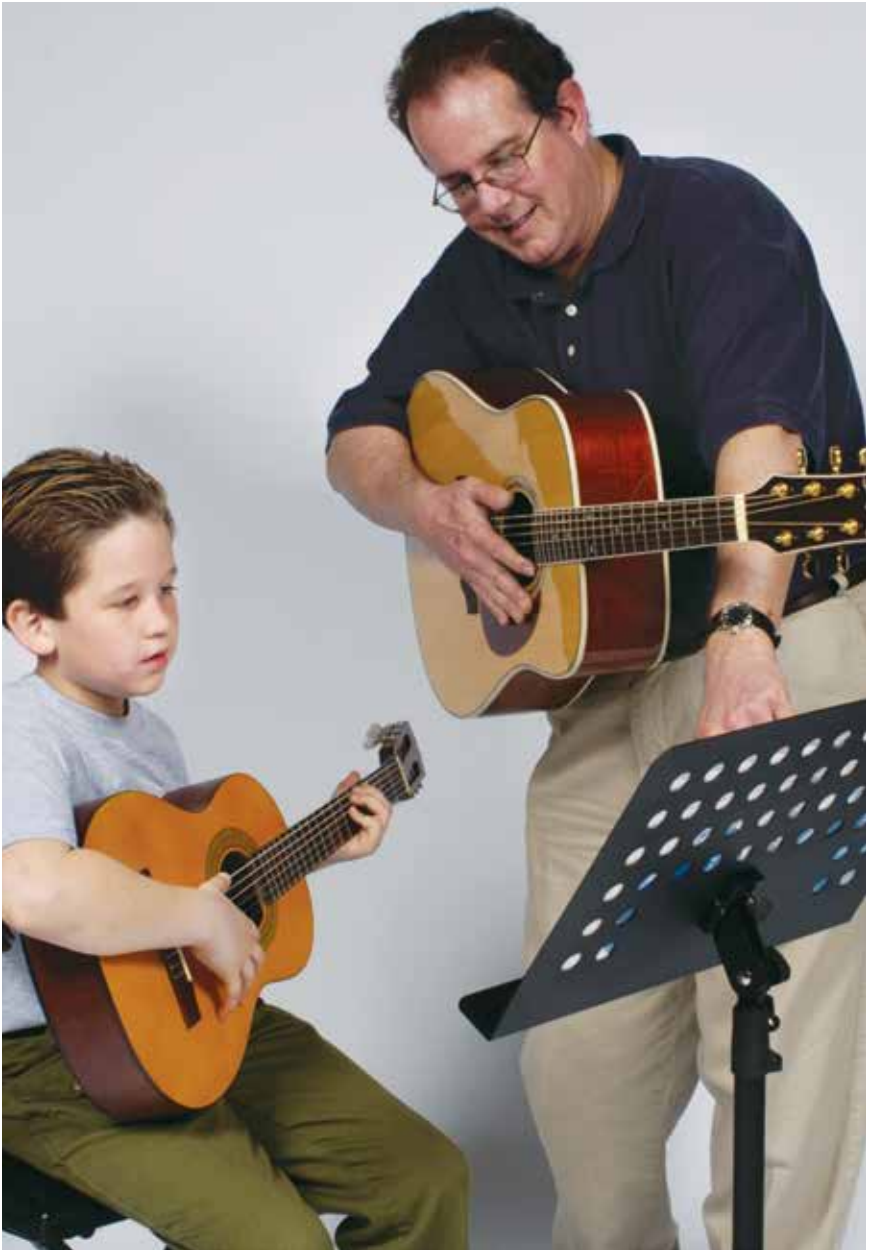
Many schools lend instruments and provide instruction for beginning students. You might be able to start your lessons at school. Later, if you like the instrument, you could find a private teacher for individual lessons.

You will get more satisfaction and longer use from a reconditioned instrument of good make than from a new instrument of inferior quality. Whatever instrument you buy, insure it against loss or damage.

Choosing a Teacher

A smaller community might have only one or two music teachers. In a larger city, you will find a bewildering array of instructors and music schools. Ask the advice of someone knowledgeable, and be sure to check with friends at school or in your unit who take lessons. A professional musician experienced in performance might also be a good instructor.

If no one nearby teaches the instrument you want to play, you might try a self-instruction course temporarily. Have someone who knows music help you with the basics: note values, counting time, clef and note placement, as well as holding, fingering, and caring for the instrument. A reliable instruction book will be helpful. Ask your music teacher or merit badge counselor for recommendations. Check your local music store, school, or public library.



If an instructor's students play well, it is a sign of good instruction.

BRUCE PEARSON'S
STANDARD OF EXCELLENCE
COMPREHENSIVE BAND METHOD
The complete curriculum
for instruction of beginning and intermediate
band students

Singing and Playing

Whether you sing, play an instrument, or whistle* to fulfill requirement 1, it will help if you know how to read music. You and your counselor can review the meanings of the instructions and symbols on the piece you plan to play. Practice until you can perform the piece using good technique, phrasing, tone, rhythm, tempo, and dynamics.

Let's look at these terms.

Technique. The way a musician handles the technical details of playing an instrument or singing.

Phrasing. Grouping notes to form distinct musical phrases. A phrase is a short musical thought, typically two to four measures (bars) long.

Tone. Sound quality.

Rhythm. A steady pattern of beats or time units in a piece of music. Some beats in the pattern are accented.

Tempo. The speed at which a piece of music is played. A slow tempo is calm and soothing, while a quick tempo can be exciting. When practicing difficult pieces of music, performers often play at a slow tempo while they learn the tough spots.

Dynamics. Degrees of sound volume and the ways to change volume.

Some Common Dynamics Terms

- Pianissimo (pp)—very soft
- Piano (p)—soft
- Mezzo forte (mf)—moderately loud
- Forte (f)—loud
- Fortissimo (ff)—very loud
- Crescendo (cresc.)—getting louder gradually
- Diminuendo (dim.)—getting softer gradually

***Note:** The counselor can accept whistling in place of voice or instrument, if the quality of whistling is superior. The whistler must show definite technical ability and musicianship while performing the assigned piece. Whistling a tune pleasantly is not enough to satisfy requirement 1.

CAMP
CONSTANTIN

Sound, Music, and Musical Instruments

To create sound, something must vibrate (move rapidly back and forth). Your vocal cords vibrate when you speak, shout, or sing. Put your hand on your throat as you speak and you will feel the vibrations. The string of a guitar vibrates when plucked. A drum's surface vibrates when tapped with a drumstick. The vibrations, or sound waves, travel through the air to your ears. The sound waves reach your eardrum, causing it to vibrate so that you hear the sound.

Different sounds have different-shaped sound waves according to each sound's *loudness* (the force of the vibration) and *frequency* (the number of times per second that the sound wave vibrates). A high note on the violin has a fast vibration; the sound waves are close together, creating a high frequency. The tuba's low-pitched notes indicate a slower vibration; sound waves are farther apart, creating a low frequency.

Stretch a rubber band between two nails. Put your ear close to the taut rubber band and pluck it. What do you hear? Pluck the band again, this time watching it closely. What do you see?

The distance between two notes with the same name (C to C, for example) is called an *octave.* The higher note has twice as many vibrations per second as the lower note. That is why it has a higher tone, or pitch (highness or lowness of the sound).

Sound the Drum

Put a few paper clips on the top of a drum. (If you do not have a real drum handy, stretch wrapping paper over a coffee can and hold the paper in place with a strong rubber band.) Tap on the drumhead. What happens to the paper clips? What do you see and hear? How do you explain your observations?

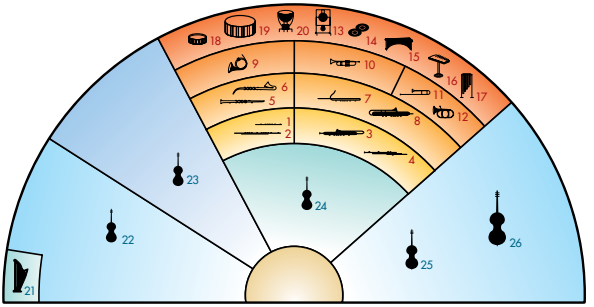


Diagram of typical orchestra seating, by families of instruments

Musical Instruments

Musical instruments usually are grouped according to how they produce sound. The five main groups, or families, are percussion, wind, stringed, keyboard, and electronic.

Percussion Instruments

Percussion means striking together to produce noise. All percussion instruments are struck—some with sticks or hand mallets, some by hand, and some by one part of the instrument hitting another, as with cymbals or castanets. Some have a definite pitch, such as the timpani, chimes, xylophone, and glockenspiel. Some have an indefinite pitch, such as the tambourine, drum, and castanets.

The most common drums are the snare drum and bass drum. The snare drum has snares (cords) stretched across its lower head. It has two forms: a smaller, shallower model called the concert snare drum; and a larger, deeper model called the field drum. Both are played with regular drumsticks.

The bass drum is the large drum used to mark the beats in music. The drummer strikes it with large mallets that are handheld or mounted on a foot pedal. Attached to the bass drum, or ready nearby, may be several accessories: cymbals, tom-toms, triangle, tambourine, maracas, whistles, cowbells, gongs, and other instruments that produce exciting and unusual sounds.

Concert snare drum, field snare drum, and bass drum

In jazz and rock music, the drummer is the driving force of the rhythm. The jazz or rock drum kit usually consists of a snare drum, a bottom drum (bass or kick drum), crash cymbals, a ride cymbal, and tom-toms. There is also a high hat (often spelled *hi-hat*), which is a pair of cymbals the drummer opens and closes with a foot pedal while playing on the upper cymbal with a drumstick or brush.

Percussionists must be mindful of tempo. While all musicians should be aware of the beat, drummers often are responsible for keeping a steady tempo.

Flute, clarinet, and saxophone

Wind Instruments

The wind instruments include the *woodwinds* (flute, piccolo, clarinet, saxophone, oboe, and bassoon) and the *brass* instruments (trumpet, French horn, tuba, and trombone).

All wind instruments are played by making air vibrate within a hollow tube. The longer the tube, the longer the column of vibrating air inside the instrument, the slower the vibration, and the lower the pitch. Each wind instrument has a way for the player to change the length of the air column to produce different notes.

Get five clean, empty bottles of the same shape and size. Fill four of the bottles with different amounts of water and leave the fifth one empty. Blow across the top of each bottle. Compare the sounds. What kind of pitch is produced when you blow across the empty bottle (the longest column of air)? And what about the pitch produced from the almost-full bottle (the shortest column of air)?

Woodwind instruments. The flute and piccolo are *edge-blown* instruments. They are played by blowing air across a hole in the hollow tube of the instrument.

The other woodwind instruments are called *reed* instruments. Sound is made when a reed—a thin piece of cane, wood, or plastic—vibrates against a mouthpiece. The clarinet and saxophone have a single-reed mouthpiece. The oboe and

bassoon have two reeds bound together. These vibrate against each other when air is blown through them.

A woodwind has holes along its length. The player shortens or lengthens the column of vibrating air in the instrument by opening and closing these holes. Vibrations occur only in the air between the mouthpiece and the first open hole. If all the holes are closed, the air column is at its longest and the lowest possible note is made.

Brass instruments. A brass instrument is played by blowing air into a cup-shaped or funnel-shaped mouthpiece, which makes the air inside the instrument vibrate. Except for the trombone and bugle, all brass instruments use finger-operated valves to open sections of tubing to make different notes. The trombonist lengthens the tube by moving the slide. The bugle is a simple tube with no mechanical control.

Trombone

Trumpet

Tuba

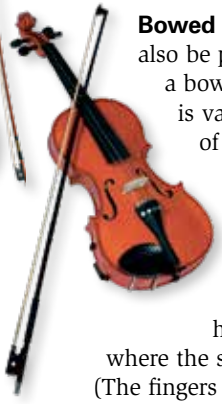
French horn

Stringed Instruments

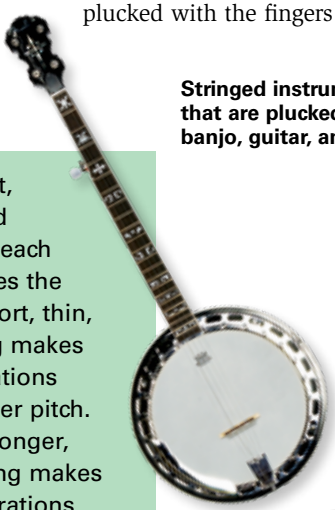
Stringed instruments fall into two groups: those that are *bowed,* such as the violin, viola, and cello; and those that are *plucked,* such as the guitar, banjo, lute, and harp.

Bowed instruments. While these instruments can also be plucked, they mainly are played by drawing a bow back and forth across the strings. The pitch is varied by pressing the strings with the fingers of the other hand. The vibrations travel into the body of the instrument, the sound box, where they resonate.

Plucked instruments. Harp strings are plucked with the fingers. Other plucked instruments, also called *fretted* instruments, have a series of frets, or ridges, that mark where the strings should be pressed to vary the tones. (The fingers are placed between the frets.) Guitars, ukuleles, and banjos are stringed instruments that are plucked with the fingers or with a small pick.



Stringed instruments that are bowed: violin and cello



Stringed instruments that are plucked: banjo, guitar, and harp

The weight, length, and tension of each string varies the pitch. A short, thin, tight string makes rapid vibrations and a higher pitch. A thicker, longer, looser string makes slower vibrations and a lower pitch. Pressing a string changes its length and tightness.

Keyboard Instruments

Keyboard instruments combine many of the features of instruments from other groups. For example, the piano is both a percussion and a stringed instrument—it makes sound when a felt-covered hammer strikes a metal string. When you press a key on a harpsichord, a string is plucked. The organ uses air forced through reeds or hollow tubes that are much like whistles, or electric vibrations.

The accordion is a handheld version of the forced-air organ, with an additional button keyboard for bass notes.

Piano

Accordion

Organ

Electronic Instruments

Electronic instruments fall into two groups: traditional instruments whose normal sound is altered electronically, such as the electric guitar; and instruments that produce sound electronically, such as the synthesizer.

Synthesizer

Electric guitar and amplifier

An electric guitar uses an electric pickup to sense vibrations in a plucked string. The pickup converts the vibrations to electric signals, which are sent to an amplifier and then converted back into vibrations by a speaker. The speaker produces the sound.

Synthesizers are computerized machines that can imitate the sounds of many instruments and produce a great variety of other sounds. They generate electric signals or replay pre-recorded signals (called "sampled sounds"). These signals are sent to an amplifier and converted to vibrations by a speaker system.

MIDI

The *musical instrument digital interface (MIDI)* lets you use a computer to record, edit, and play back music using MIDI-compatible electronic instruments—usually keyboard synthesizers. With MIDI, you can compose and edit your own music, learn about music theory, or turn a home computer into a do-it-yourself music-mixing studio.

Many composers today write music on a computer that has MIDI instruments attached to it. Using special software, a composer tells a MIDI synthesizer what notes to play, and at what tempo and volume. The composer can "cut and paste" to rearrange music sequences and fix mistakes by editing individual notes.

The composer selects what musical instrument the synthesizer should sound like—a piano, for example, or maybe a violin, guitar, flute, trumpet, or drum. Using MIDI instruments, a composer working alone can play all the parts in a musical composition, and all of the various instruments. With a MIDI-equipped computer and synthesizer, a composer can create a virtual orchestra at home and listen to compositions at any time.

Noteworthy Inventors

In the 1760s, Benjamin Franklin invented the *glass harmonica,* a set of glass bowls arranged by size on a spindle. The player used a foot treadle to turn the spindle and produced tones by touching the rims of the rotating glasses. The instrument was popular in the late 1700s and early 1800s, but it is seldom played today.

Other musical inventions have been more successful. Here are some important inventors and their inventions. You can find out more about them in an encyclopedia or on the internet (with your parent or guardian's permission).

Johann Christoph Denner—clarinet, about 1700

Bartolommeo Cristofori—piano, about 1710

Adolphe Sax—saxophone, about 1840

Thomas A. Edison—phonograph (record player), 1877

Guglielmo Marconi—wireless telegraphy (radio), 1895

Morse Robb—electronic organ, 1928

George Beauchamp, Adolph Rickenbacker, Les Paul, Leo Fender, and Paul Bigsby—electric guitars, 1930s and 1940s

Hugh Le Caine—synthesizer, 1945

Dave Smith—musical instrument digital interface (MIDI), early 1980s

DAUGHTRY
RASCAL FLATTS
melt
carrie underwood
KELLY CLARKSON
SINCE U BEEN GONE
AN ATOMIC BOMB

Music Appreciation

Attending live performances is the best way to experience music. Look for concerts by popular artists, bands, community orchestras and choruses, and at colleges and universities. Some recitals by college students are open to the public for free.

If you choose requirements 3(a) or 3(b), you might find yourself listening to music more intently than ever before. Take notes so you can recall your impressions of each piece of music when you talk with your counselor. Also note such information as composers or songwriters, orchestras or performers, conductors, and solo artists.

If there are no live performances in your area, you can listen to recordings—CDs or streaming. Check radio and public television schedules, too. Internet radio offers music from all genres (types) at your demand. Videos and DVDs of concerts and operas are available at libraries and online. Also, many artists and record labels offer free samples of their music online. Whenever you download music from the internet, be sure you have your parent or guardian's permission and that you are not infringing upon copyright laws.

The Scout Oath and Scout Law relate directly to observing intellectual property law. Young people frequently have an opportunity to copy or share music, movies, or games with others without permission of the publisher. However, Scouts who knowingly make copies without permission are violating the Scout Oath's pledge to be "morally straight" and the point of the Scout Law calling on Scouts to be "trustworthy."Unauthorized and illegal content sharing is not a victimless crime. This behavior may disadvantage and discourage those who create intellectual property economically and creatively.

A *concert* is a public musical performance, usually involving more than two performers. A *recital* usually is a more private performance, featuring music of a single kind (or a single composer), sung or played by one person or a small group.

Consider each piece of music. Did it make you feel happy? Excited? Annoyed? Peaceful? Wistful? Were you glad when it ended, or could you have listened to it for hours? These are the questions that matter. Great music cannot really be explained, though critics might analyze it in endless detail. What the composer or songwriter intended is interesting to know, but what matters is your reaction to the music.

Classical Music

Classical music is written mostly for concerts, operas, ballets, and religious services. Classical music is also called "art music." Here are some types of classical music and performances to which you might listen.

Symphony. A major musical work played by an orchestra. Most symphonies have four movements, or parts. Famous symphonies include Beethoven's Fifth ("da-da-da-DUM") and Mozart's Symphony No. 41 (nicknamed the *Jupiter* Symphony).

Opera. A drama that is sung rather than spoken, usually accompanied by a full orchestra. Operas combine music, art, and drama. They often are staged with impressive costumes, scenery, and lighting. The term *grand opera* describes operas with serious or tragic plots, in which every word is sung. Some of the best-known operas are:

- *Don Giovanni* by Wolfgang Amadeus Mozart (1756–91)
- *Aïda* and *Rigoletto* by Giuseppe Verdi (1813–1901)
- *Carmen* by Georges Bizet (1838–75)
- *Madame Butterfly* by Giacomo Puccini (1858–1924)

If you are new to opera, you might want to start with operas in English. Look for *Amahl and the Night Visitors* (Gian-Carlo Menotti) and *Porgy and Bess* (George Gershwin). Recordings are available of operas based on American events and people, such as *Nixon in China* (John Adams) and *X: The Life and Times of Malcolm X* (Anthony Davis).

Be sure to read the story of an opera before you listen to a performance. Many operas are in German, French, or Italian. You might be able to find and read the libretto (the entire text) in English.

Operetta. A shorter, less serious form of the operatic art, with spoken dialogue and humorous romantic plots. Some of the best-known operettas are:

- *The Pirates of Penzance* and *The Mikado* by composer William S. Gilbert (1836–1911) and librettist Arthur Sullivan (1842–1900)
- *Babes in Toyland* by Victor Herbert (1859–1924)
- *The Student Prince* by Sigmund Romberg (1887–1951)
- *Rose Marie* and *The Vagabond King* by Rudolf Friml (1879–1972)

Oratorio. A serious composition sung by a chorus and soloists accompanied by a full orchestra. It usually is religious and based on the Bible. There are no costumes, scenery, or action. Some of the great oratorios are:

- *Saint Matthew Passion* by Johann Sebastian Bach (1685–1750)
- *Messiah* by George Frideric Handel (1685–1759)
- *The Creation* and *The Seasons* by Franz Joseph Haydn (1732–1809)
- *Saint Paul* and *Elijah* by Felix Mendelssohn (1809–47)

Scene from *The Nutcracker*

Ballet. Great music has been created for classical ballet. Igor Stravinsky (1882–1971) composed music for *The Firebird, Petrushka,* and *The Rite of Spring.* Peter Tchaikovsky (1840–93) created the music for *Swan Lake, The Sleeping Beauty,* and *The Nutcracker.* The music has often been performed and recorded apart from the ballet performances.

Program music. Program music describes something or tells a story. Examples are *Grand Canyon Suite* by Ferde Grofé (1892–1972), *The Sorcerer's Apprentice* by Paul Dukas (1865–1935), and *Peter and the Wolf* by Sergey Prokofiev (1891–1953). The composer creates the piece to inspire certain images, thoughts, and feelings for the listener. Sometimes the description is barely suggested, or the title indicates the meaning. Sometimes the entire story behind the music is printed in the program.

Popular Music

The many different styles of popular music include bluegrass, blues, country, folk, gospel, jazz, rap, rock, and soul. Some popular music loses its appeal quickly, but many pop songs have lasted for decades, even centuries.

Music in America

If these pages could play the music of what you are about to read, you would hear the drums and chants of American Indian tribal songs. You would hear the music that sailed across the Atlantic from Europe: hymns, folk ballads, and symphonies. And you would hear the rhythms of Africa mingled with jazz, blues, and work songs.

This section will help you trace the development of music in America and fulfill requirement 3(d). It will give you ideas about composers and performers whose lives and works you might like to investigate. The best way to learn about them is through listening to their music and reading books about their lives.

American music is the sounds of American life—of people praying, protesting, working, and celebrating. American music is a true melting pot of styles, ethnic backgrounds, and boundless experimentation.

American Indian Musical Traditions

Some American Indian tribes believed new songs came in dreams or visions. Each song had a purpose: to assure success in hunting or battle, to heal the sick, or to praise a person's generosity. Traditional instruments included flutes, whistles, drums, and rattles made from gourds.

As American music developed, it rarely borrowed from American Indian music. Meanwhile, tribes preserved their own music, songs, and dances. Today, many recording artists play

traditional American Indian instruments. R. Carlos Nakai, who is of Navajo-Ute heritage, has included traditional tribal melodies in his compositions for the American Indian flute. The work of Mohican composer Brent Michael Davids has been performed at the Kennedy Center.

The Colonies

Religious music was a basic part of life in the Colonies. Early New England Puritans sang psalms, but they did not use musical instruments in their churches. The Moravians in Pennsylvania, however, included singing, organ music, and orchestral instruments in their religious services.

Settlers sang folk songs, lullabies, and sailors' chanteys from their home countries. As musical instruments from Europe became available, more music was played in Colonial homes. Traveling music masters taught the violin, flute, spinet, harpsichord, and guitar.

Slaves brought West African musical traditions and mixed them with the European-style music they heard around them. Techniques from Africa included complex rhythms, sliding notes, and the call-and-response form.

The first book of entirely American music was the *New England Psalm Singer* by William Billings, a Boston tanner with a passion for creating music. The book was published in 1770 on American-made paper, with a frontispiece (illustration) engraved by Paul Revere. Billings' compositions had an originality and energy that reflected the frontier spirit.

Revolutionary War–era drum and fife corps

America's first hit was "Yankee Doodle." The verse that starts "Yankee Doodle came to town" was well-known before the Revolutionary War. The British sang it to insult the Colonials, but the Yankees adopted the tune and marched to war with it.

The 1800s

Following the Revolutionary War, Americans built theaters and started philharmonic societies and symphony orchestras in the larger cities. Professional musicians arrived from Europe and gave concerts around the country. New Orleans became known for opera.

Francis Scott Key wrote the national anthem of the United States after the bombardment of Fort McHenry at Baltimore, Maryland, during the War of 1812. When Key saw the bedraggled American flag still flying above the fort at dawn, he dashed off to pen the words to "The Star-Spangled Banner" and set it to an old English tune called "To Anacreon in Heaven."

The mariachi band has a colorful history dating back hundreds of years. The modern-day mariachi band, such as this one, often will have violins, guitar, trumpets, the vihuela (a small five-string guitar), and the guitarrón (six-string bass guitar).

Settlers in the Southwest played the music of Spain and Mexico. Singing and dancing at fiestas lasted for days. Musicians favored the guitar but also played the violin, harp, and flute. Missions had their own choirs.

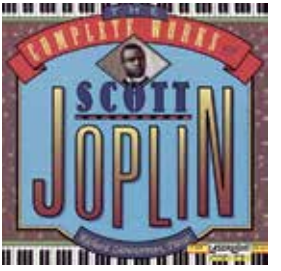
Many American families played music from sheet music and songbooks on upright pianos in their homes. In the mid-1800s, Stephen Foster wrote popular songs you probably know, such as "Oh! Susanna," "De Camptown Races," and "My Old Kentucky Home." The Civil War inspired an outpouring of songs praising the bravery of soldiers and expressing the strong feelings people had about the war.

Rural residents traveled to "camp meetings" to hear sermons by circuit-riding preachers. People sang hymns, clapped their hands, and jumped for joy, creating a new style of song called the *spiritual.*

Among African Americans, spiritual style included humming, joyful moaning, and *improvisation* (spur-of-the-moment invention) around the melody—more qualities from African heritage that would have lasting influence on American music.

Blues songs use "blue notes," notes that are somewhere between natural and flat. The blues often express sorrow or loneliness, or speak of life's troubles with humor or defiance.

The 1890s and Popular Music



Scott Joplin, the leading composer of ragtime, said it was never right to play ragtime fast. Joplin's compositions include "Maple Leaf Rag" and "The Entertainer."

In the 1890s, band music and ragtime swept the nation. The popularity of band music was due mainly to John Philip Sousa, who toured the country with his concert band. Sousa's marches, such as "Washington Post" and "The Stars and Stripes Forever," are a permanent part of American music.

By 1900, all of America danced to *ragtime*. Written mainly by African American pianists, the name comes from "ragged time," or uneven rhythm. While the pianist's left hand played a regular beat, the right hand played a *syncopated* (irregularly accented) melody. It was technically challenging music to play.

This complex, entertaining music has recently been revived among pianists. The popular 1973 movie *The Sting* used rags by composer Scott Joplin in its background score.

Into the 20th Century

Elements of popular, folk, and classical music began to mix in the 20th century, thanks to new technologies and the mass media. Some of the distinctly American styles that grew out of the mix are described briefly here.

Guitarist/singer B.B. King carried on the blues tradition until his death in 2015.

The Blues

Around 1900, many African Americans moved from the rural South to cities. With them they brought "country" or "down-home" *blues* that came from work songs and spirituals. When this music met urban song styles, "city blues" resulted.

Famous blues singers include Blind Lemon Jefferson, Gertrude "Ma" Rainey, and Bessie Smith. The composer W.C. Handy became known as "Father of the Blues" because he brought the music to a wide audience. Many consider "St. Louis Blues" to be Handy's masterpiece.

Jazz

Between 1900 and 1910, brass bands in the South started to "rag" their marches, and horns wailed like blues singers. Ragtime and blues set the stage for *jazz*, which has had enormous influence on both popular and classical music. New Orleans was the cradle of early traditional jazz, though jazz was played in other places, too. Elements typical of jazz include improvisation around a melody, *riffs* (short repeated phrases), blue notes, and call-and-response between instruments or between a voice and instruments.

In New Orleans, African American bands played for parades, dances, and funerals. The cornet, trombone, and clarinet players would improvise, each playing a different version of a melody all at once. The result was a happy, lively sound, in numbers such as "When the Saints Go Marching In."

Jazz often is described as America's greatest contribution to world music. Important jazz pioneers include: Charles "Buddy" Bolden, Edward "Kid" Ory, Joseph "King" Oliver, Ferdinand "Jelly Roll" Morton, and Louis "Satchmo" Armstrong.

After Louis Armstrong started improvising trumpet solos, the solo became a basic in jazz. He also introduced "scat" singing, a solo of rhythmical nonsense syllables.

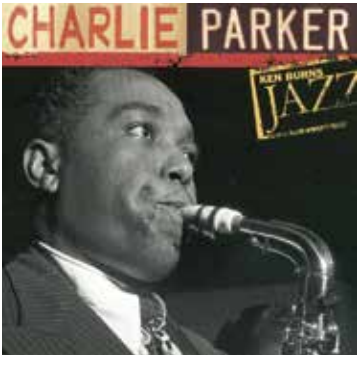
Unlike early jazz bands, big bands and swing bands relied more on written music than on improvisation.

Big Band and Swing

Big band jazz came on the scene in the late 1920s with more instruments and danceable music. The bandleader Benny Goodman originated the lively sound of swing in 1935. Edward "Duke" Ellington—jazz pianist, bandleader, and one of America's foremost composers—created complex innovative jazz. Some leading vocalists with swing bands were Billie Holiday, Frank Sinatra, and Ella Fitzgerald.

Bebop

Swing moved too far from its jazz roots for some musicians. They rebelled in the early 1940s with *bebop,* or *bop*. Bop had complicated rhythms and harmonies meant for listening, not dancing. The trumpeter Dizzy Gillespie, the pianist Thelonious Monk, and the saxophonist Charlie "Bird" Parker, three of the best jazz improvisers, were important bop musicians.



Other Jazz Styles

More jazz styles followed. *Cool,* or *progressive,* jazz had a smooth, mellow sound and sometimes included the French horn, flute, or cello. The trumpeter Miles Davis was a leading cool-jazz musician.

In the 1960s, saxophonists Ornette Coleman and John Coltrane were important to *free jazz.* Free jazz generally allowed all musicians in a band to improvise without being guided by a basic melody.

Jazz-rock fusion combined jazz's improvisations with rock's rhythms and sound. This meant the addition of synthesizers, along with the electric piano, guitar, and bass. Miles Davis and the pianist Herbie Hancock were pioneers in jazz-rock fusion, which started in the late 1960s.

Classical Music in the 20th Century

During the first half of the 20th century, adventurous changes in classical music took place. Here are a few important modern composers.

Charles Ives (1874–1954) used complex rhythms and *dissonances* (combinations of tones that seem to clash). His highly original music is often playful and humorous. In his *Holidays* symphony, he created the effect of three marching bands playing different tunes all at once. His well-known works include "Three Places in New England" and "General William Booth Enters Into Heaven." Ives has been called the United States' first great composer.

William Grant Still (1895–1978) was the first African American composer whose classical music was widely published and performed. Still's *Afro-American* symphony has a blues theme. He set his *Songs of Separation* to the writings of famous black poets. His *Ennanga* suite is a tribute to his African heritage; his opera *Mota* is set in Africa.

George Gershwin's brother, Ira Gershwin (1896–1983), *right,* usually wrote the lyrics for George's musicals.

George Gershwin (1898–1937) wrote popular songs, musical comedies, orchestral works, and opera. At 20, he wrote his first Broadway musical and then a string of hit songs and musicals. Gershwin's famous *Rhapsody in Blue* has a blues theme and jazzlike rhythms. His folk opera, *Porgy and Bess,* has been performed all over the world.

By the time he was 15, **Aaron Copland** (1900–90) knew he would be a composer. He studied in Paris, then returned home determined to write music that would be recognized as distinctly American. His music for the ballets *Billy the Kid, Rodeo,* and *Appalachian Spring* drew on American folklore.

Aaron Copland

Milton Babbitt (1916–2011) built on the work of Arnold Schoenberg (1874–1951), an Austrian composer whose "serial music" repeated a pattern of 12 selected tones. Babbitt extended this method to patterns of rhythm, timbre, dynamics, and instruments for "total serialization." The result is complex interwoven music.

In the 1960s, Babbitt was one of the first composers of electronic music. He also mixed electronic music with live performances by singers and instrumentalists.

John Cage (1912–92) composed music based on chance. Each performance of a Cage composition is unpredictable. Some of Cage's works are for "prepared piano," a piano with its tones altered by objects such as coins, screws, hairpins, and bits of wood and rubber placed among the strings. In *Fontana Mix,* Cage's written music is a set of flowing-line drawings, transparent pages, and a graph that can be combined in several ways. Performers are free to interpret the result, which looks like a cross between modern art and a road map.

Other Modern Composers

Listen to the works of modern composers to appreciate their unique contributions to classical music. Here are some other important composers:

John Adams (1947–)
Samuel Barber (1910–81)
Amy Beach (1867–1944)
Paul Bowles (1910–99)
Elliott Carter (1908–2012)
John Corigliano (1938–)
Henry Cowell (1897–1965)
Ruth Crawford-Seeger (1901–53)
Paul Creston (1906–85)
George Crumb (1929–)
Norman Dello Joio (1913–2008)
David Diamond (1915–2005)
Lukas Foss (1922–2009)
Philip Glass (1937–)
Morton Gould (1913–96)
Howard Hanson (1896–1981)
Roy Harris (1898–1979)
Barbara Kolb (1939–)
Ned Rorem (1923–)
Christopher Rouse (1949–)
Carl Ruggles (1876–1971)
William Schuman (1910–92)
Roger Sessions (1896–1985)
Virgil Thomson (1896–1989)
Joan Tower (1938–)
Andrew Lloyd Webber (1948–)
John Williams (1932–)
Ellen Taaffe Zwilich (1939–)

Musical Theater

America's first musicals were *revues,* in which the plots were just excuses to tie songs together. At that time, songwriters were more interested in creating hit tunes that would sell sheet music than telling stories.

But that changed in the 1920s when composers and lyricists began to link better stories with songs. *Show Boat* led the way, with its serious plot, music by Jerome Kern, and lyrics by Oscar Hammerstein II. Its songs, such as "Ol' Man River," were threaded into the plot and helped the audience understand the characters.

***Oklahoma!* began the modern era in 1943. Richard Rodgers, composer, and lyricist Oscar Hammerstein II created songs such as "Oh, What a Beautiful Mornin'" to express the spirit of the time, place, and characters. Together, the songs and dances told the story.**

Leonard Bernstein (1918–90) was an extremely versatile composer of musicals, opera, ballet, choral works, and symphonies. He often used syncopation and jazz and dance rhythms in his work. He composed the exciting music for *West Side Story,* which combined music, drama, and dance in a new way. The story, based on Shakespeare's *Romeo and Juliet*, is set amid New York tenements and deals with young love and teenage gangs. The action is both comic and tragic. The songs, with lyrics by Sondheim, range from beautiful to tough to funny.

Leonard Bernstein—composer, conductor, pianist

Other important composers of musicals were Irving Berlin (who also wrote "God Bless America"), Cole Porter, Frank Loesser, and Stephen Sondheim.

Popular Music

Whatever style of today's music you like, you can be sure it has a history. The music sounds the way it does today because it has been shaped along the way by songwriters and performers. Pop, jazz, folk, blues, country, bluegrass, gospel, rock, and rap have borrowed from one another, and many artists work in several genres.

Countless artists have been pop musicians. Barbra Streisand, Quincy Jones, Madonna, Jennifer Lopez, Celine Dion, and Backstreet Boys are some examples.

Avril Lavigne and her band have been described as "nouveau-punk."

Pop

Pop covers a wide territory: romantic songs, novelty tunes, songs with messages, movie themes, and more. Radio "crooners" with soft, almost whispering styles were popular in the late 1920s. In the 1940s, big-band singers like Frank Sinatra became sensations. After World War II, a stronger economy meant teenagers had money to buy records. New music was written to appeal to the young consumers.

Country

Country music developed from British ballads and folk songs that were preserved in the South. In the mid-1920s, radio shows such as the *National Barn Dance* in Chicago and the *Grand Ole Opry* in Nashville began to broadcast this "hillbilly music" to a wider audience.

But the music was already changing. Jimmie Rodgers combined the Southern mountain ballad with the blues and a vocal embellishment called the yodel to produce a new style

Country music's popularity has grown with the rise of stars such as Willie Nelson, Dolly Parton, Garth Brooks, Tim McGraw, Brooks & Dunn, George Strait, Alan Jackson *(left)*, Lee Ann Womack, Faith Hill, and many others.

of country. Rodgers' songs were among the first to attract a national audience to rural Southern music.

Country music turned to the West with the success of cowboy movies in the 1930s and 1940s. Honky-tonk music followed and dealt with subjects like love and loss. Later, a new relaxed style with an easy beat, known as "the Nashville Sound," developed.

The Carter Family, Bob Wills, Roy Acuff, Eddy Arnold, Hank Williams, Kitty Wells, Patsy Cline, Loretta Lynn, Tammy Wynette, Chet Atkins, and Charley Pride are some of the founding artists of country music.

Bluegrass

Country music gave birth to a new style called *bluegrass,* pioneered by Bill Monroe and his band, the Blue Grass Boys, beginning in 1939. Bluegrass is characterized by complicated vocal and instrumental solos and distinctive vocal harmonies including duet, trio, and quartet harmony singing. A typical bluegrass band has guitar, banjo, fiddle, mandolin, and bass. Bands sometimes feature a kind of steel guitar called a *resophonic guitar.*

Lester Flatt and Earl Scruggs were important bluegrass performers from the 1940s through the 1960s. Among the major bluegrass groups of recent years are the Nashville Bluegrass Band, Hot Rize, and Alison Krauss with her group Union Station.

Earl Scruggs wrote one of bluegrass music's most famous instrumentals, "Foggy Mountain Breakdown," which was used in the soundtrack of the 1967 film *Bonnie and Clyde. Deliverance* (1972) also featured bluegrass, the famous "Dueling Banjos." In 2001, the soundtrack for *O Brother, Where Art Thou?* exposed more people to bluegrass and traditional country music.

Gospel

The father of gospel music, most experts agree, is Thomas A. Dorsey, composer of such well-known songs as "Take My Hand, Precious Lord" and "There Will Be Peace in the Valley." As a young blues pianist, Dorsey accompanied blues singers Bessie Smith and Ma Rainey. Then he began to write religious music that had jazz rhythms and blues flavor. Gospel emerged from the African American church to reach an ever-widening

Gospel choirs sing in unison or in harmony, and often are led by a principal singer or singers. Among the best-known gospel choirs is the Mississippi Mass Choir.

audience. The golden age of gospel was from 1945 to 1965, but the tradition and the music thrive today.

The gospel style is vigorous, fervent, and intensely spiritual. Famous gospel performers include Mahalia Jackson, Clara Ward, Sister Rosetta Tharpe, the Mississippi Mass Choir, James Cleveland, the Mighty Clouds of Joy, and the Five Blind Boys of Alabama.

Pop singers who have been heavily influenced by gospel include Sam Cooke, Aretha Franklin, Della Reese, Lou Rawls, and Ray Charles. Some major names among contemporary gospel performers are Kirk Franklin, Jonathan McReynolds, and CeCe Winans.

Singer-songwriter Bob Dylan, a leader in the folk-rock movement of the 1960s, wrote meaningful lyrics about social issues. Dylan's classic songs include "Blowin' in the Wind" and "The Times They Are A-Changin'."

Folk

Folk music in the 20th century has often featured songs of protest against conditions of the day. Woody Guthrie wrote protest songs as the nation struggled with the poverty brought on by the dust storms and economic troubles of the 1930s. You might know his song "This Land Is Your Land."

In the late 1950s and early 1960s, folk singing became especially popular. Folk artists such as Pete Seeger, Joan Baez, Judy Collins, Bob Dylan, and Peter, Paul, and Mary rose to fame.

Rock

Teenagers claimed *rock 'n' roll,* the new music that emerged in the mid-1950s, as their own music. Today's rock music evolved from early rock 'n' roll to cover a wide variety of vocal styles and instrumentation. Rock music has roots in *rhythm and blues* (R & B), which combines blues, jazz, and gospel styles. R & B has a powerful beat and loud, intense music and vocals. Little Richard and Chuck Berry were prominent R & B artists. Rock also drew from country music. A typical rock song has a driving beat, lots of volume, and simple repetitive phrases.

The Beatles from Liverpool, England, toured the United States in 1964 and revolutionized rock. They sang sophisticated lyrics in styles that ranged from ballads to hard rock. Their influence encouraged other rock groups to expand styles, instrumentation, and electronic effects.

The first rock 'n' roll hit was "Rock Around the Clock" by Bill Haley and His Comets in 1954. In the late 1950s, Elvis Presley launched his career and was on his way to becoming the King of Rock 'N' Roll.

In the 1960s, James Brown, Ray Charles, Aretha Franklin, and others sang rock music called *soul.* Detroit became a center for black singers, and the "Motown" sound developed there. Well-known Motown singers include the Temptations, Smokey Robinson and the Miracles, and Diana Ross and the Supremes.

Some famous names in rock are the Beach Boys, Eric Clapton, the Grateful Dead, Jimi Hendrix, the Rolling Stones, Bruce Springsteen, Tina Turner, U2, and Stevie Wonder.

From the 1970s through the early 2000s, rock evolved and branched into different styles that, in turn, influenced each other. Punk, heavy metal, and rap are three main rock genres.

Well-known heavy metal or hard rock bands from the late 1960s through the early 2000s include Led Zeppelin, Aerosmith, KISS, Van Halen, and Bon Jovi.

The Scorpions

Heavy Metal

Heavy metal is loud, theatrical, aggressive, wild and raw, and often controversial. Metal music has been criticized for its themes of death and destruction. Many heavy metal songs express anger or desperation and intense feelings of alienation.

Metal music takes advantage of the modern electric guitar's abilities to make unusual sounds through effects such as feedback, distortion, and reverb (an electronically produced echo effect). Metal borrows from rock 'n' roll and the blues, with influences from classical music.

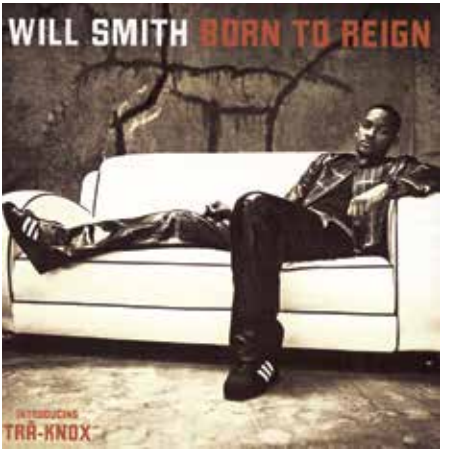
Early punk bands such as The Ramones and The Clash set the stage for New Wave music (with electronic influences) of the 1980s and Grunge music (with heavy metal influences) of the 1990s, inspiring artists such as Elvis Costello, New Order, Talking Heads, and Nirvana.

Rap

Rap, with its rhythmic spoken lyrics, is a kind of street poetry set to music. Rap speaks openly about tough topics. Rap artists often talk about the hardships and violence experienced by many young African Americans in big cities. The lyrics of some rap songs have caused controversy for their emphasis on racism and violence.

The term "rap" comes from a 1960s slang word for "conversation." Rappers often speak or chant their songs to electronic beats and the sounds of records being scratched.

Rap grew out of African American street culture in New York City during the 1970s. It became the most popular new music to emerge in the late 20th century. Early rap groups included Grandmaster Flash and Afrika Bambaataa. Performers such as Salt-N-Pepa and MC Hammer brought rap to a mainstream audience. Other influential rap performers have included Run-DMC, Queen Latifah, and Arrested Development.



Also a successful actor, Will Smith began his career as a rapper in the mid-1980s.

A Mixture of Music

Musicians today often blur the line between classical and popular music. Josh Groban sings pop, rock, opera, and classical. Rock star Sting and the group U2 blend opera with their music. Jazz singer Bobby McFerrin and classical cellist Yo-Yo Ma performed together. Opera star Kathleen Battle sang with pop star Janet Jackson. Rock composer Prince wrote the score for the Joffrey Ballet's *Billboards.* The Kronos Quartet (a string quartet) performed works by Ornette Coleman, Charles Ives, and Jimi Hendrix. Christopher Rouse composed work influenced by Beethoven, Indian raga music, and Elvis Presley.

The music of America developed out of international musical traditions and forms. But jazz, blues, and musical theater are America's unique contributions to the world of music.

Joining a Musical Group

Part of the fun of being a musician comes from sharing your talent and love of music, practicing with other musicians, and performing music for audiences to enjoy. If you sing or play an instrument, it should be easy to find a musical group to join.

Schools have choruses, orchestras, marching bands, and drum and bugle corps. Many have smaller groups such as string quartets, brass ensembles, and jazz bands. Places of worship have choir, bell choirs, and other vocal and instrumental groups. You might join a community orchestra or chorus. Local groups might preserve cultural music traditions and give you the chance to express your heritage.

Your teacher can help you decide when to join a group. Singing or playing with others is quite different from working solo. You watch the conductor and play exactly as he or she directs: softly or loudly, more quickly or slowly. You watch for your cue to play. You learn to continue with your part while other instruments play around you. You also learn to blend your part with the rest, developing a sense of ensemble playing.

Why not take the lead in organizing a drum and bugle corps that will be a source of pride to your unit and a feature in community parades?

Scout units also have other kinds of musical groups. Using the guidelines in this section, you might help organize an ensemble, band, or singing group, especially if there are no other local musical groups for you to join for requirement 3(c).

Drum and Bugle Corps

It takes only a few drums and bugles to sound like a sizable unit. Two snare drums, a bass drum, and a couple of bugles blend well together. For more impact, add cymbals, another bugle or two, and perhaps three or four fifes. Now the combination can handle march music, bugle calls, drill signals, and music for camp ceremonies and other Scouting occasions.

Ensembles

Two violins, a viola, and a cello make a string quartet. With two trumpets, a French horn, a trombone, and a tuba, you can have a brass quintet.

Jazz Combo

A jazz combo has two sections: a melody "front line" that performs most of the solos, and a rhythm "back line." The front line has one to five brass and reed instruments: trumpet, trombone, clarinet, and alto and tenor saxophones. The rhythm section has a piano, bass, drums, and sometimes an acoustic or electric guitar.

Think beyond drums and guitars to organize a rock band, using the available mix of interested musicians.

Rock Band

Electric guitars and drums are the basic instruments in a rock band. A piano or synthesizer might be included, too.

Many rock bands have four or five members. The Beatles are a classic example of a four-instrument band, with lead guitar, rhythm guitar, bass, and drums. Other bands are larger. Chicago adds trumpet, trombone, and tenor sax to guitar, bass, keyboards, and drums to total eight members.

A Cappella Group

A cappella is Italian for "in chapel style." It means singing without instrumental accompaniment.

A barbershop quartet is an example of an a cappella group. An American style of harmony, it uses four voices: tenor, lead, baritone, and bass. The four voices make a complete four-part chord on almost every note, creating the distinctive sound of barbershop quartets.

In most choral singing, the highest voice sings the melody. But in barbershop quartets, the second-highest voice, called the *lead,* sings the melody.

Leading a Group

You will learn that you do not have to be the world's best singer to teach or lead songs.

Teaching a Song

These tips will get you started and help you relax and have fun, too.

1. Practice the words and the melody of the song you will teach until you know the song by heart.
2. Smile at the group. Be enthusiastic and act confident, even if this is your first time teaching a song.
3. Start with a lively, well-known warm-up number, so everyone (including you) can sing with confidence.
4. Tell the group the name of the song, and provide copies of the lyrics. Use songbooks or song sheets, or write the lyrics on a blackboard or large sheet of paper.
5. Sing the song through alone or with a small group that already knows it.
6. Then sing phrase by phrase and have the group repeat after you. If the song has several verses, teach one verse at a time.
7. When the group has learned the phrases or verses, sing the song all together. If the song is fast or difficult, sing it slowly at first, then pick up speed as the singers master it.
8. Musical accompaniment helps. Piano, accordion, guitar, and harmonica are good accompaniments because they can play harmony, not just the melody.
9. When the group has sung the song a time or two, stop. Do not work so hard that it is no longer fun. Go at once to a familiar song.

For optional requirement 4(a), you are to teach three songs. Begin with simple songs. Save difficult ones until you are a more experienced teacher.

Leading a Song

Because teaching is a part of song leading, many of the tips in this chapter apply to both. Here are a few more hints to help you lead songs successfully.

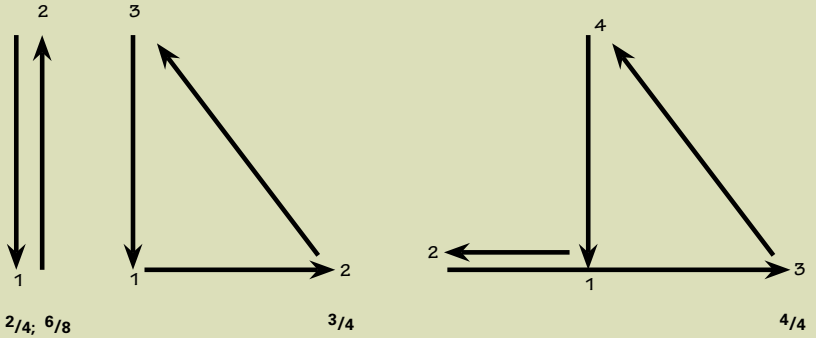
1. Give the starting note. Sing or hum a few bars of the song. Or, have a few bars played, if an instrument is available. Be careful not to pitch the song too high or low. If you start the group on the wrong note, stop and start over.
2. Start with a slight upward arm motion followed by a decisive downward motion (a downbeat), and begin singing. Do not worry if some don't start with the first note. They will join in quickly.
3. Beat time with a simple down-and-up motion of the arm. Hold your arm high enough for everyone to see, and make your gestures definite and brisk. You are in command.
4. Control volume by raising your free hand for loudness and lowering it for softness. Do not beat time with both hands at once.
5. Move around a little, put some energy into it, and smile.
6. Stop while everyone is still having fun. Leave the group wanting more.

Keep the Beat

With songs that have 2/4, 3/4, and 6/8 time, make the downbeat on the first beat of each measure.

With songs that have 4/4 time, make the downbeat on the first beat of the measure, and also make the third beat a strong beat.

Demonstrate and explain these hand motions if your group is not familiar with them.



Composing Music

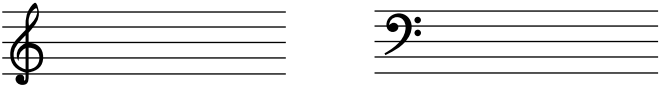
When you compose music, you bring your musical ideas and sounds into the world. Creating one-of-a-kind, original work is exciting and challenging.

Keys and Scales

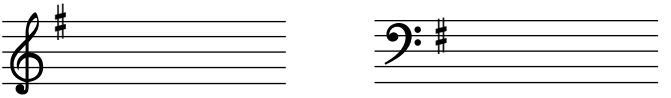
Prepare for requirement 4(b) by reviewing what you know (or need to learn) about *keys.* Music is said to be in a particular key when it is based upon the *scale* starting with the key note (the first note) of the same name.

For example, music in the key of **C major** is based on the scale of C major. The scale of C major is C D E F G A B C.

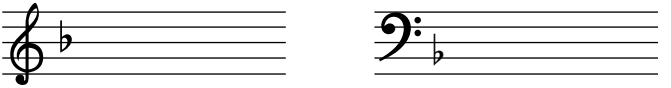
Keys are indicated by *key signatures*—the sharps (♯) or flats (♭) are placed to the right of the clef.



The key signature for the key of C major has no sharps or flats.



The key of G major has one sharp—F-sharp—in the key signature.



The key of F major has one flat—B-flat—in the key signature.

The scale of G major is G A B C D E F-sharp G.

The scale of F major is F G A B-flat C D E F.

Play or sing these scales and the scale of C major; they will sound very familiar.

Four-Note Composition

Pick a scale, and from it choose four notes. Play or sing them as whole notes, half notes, and quarter notes. Rearrange the order of the notes, sometimes omitting a note or two. Experiment with and create patterns of notes and rhythms. Repeat and vary the patterns.

Listen to the results. Trust what your ear tells you. When you hear something you like, repeat it several times to help you remember it. Change things you do not like. Experiment freely, trying different musical ideas. Do not worry about whether your tune is good. The important thing is to enjoy making your own original music.

Many experienced musicians recommend using only four notes for your first compositions. The four-note limit keeps things simple, helps you focus, yet allows you to express many distinct musical ideas.

Start and end your melody on the first note of the scale. This will help give shape to your music and also help you stay in one key.

Here are some four-note combinations you might try. Explore other combinations, too.

C D F G
G B C D
F G B-flat C

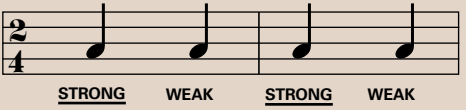
Time Signatures

On the staff at the beginning of written music you find two numbers. The numbers are the *time signature.* They indicate how many beats are in each bar, and the type (or value) of the beats.

In the 4/4 time signature, the top number says there are four beats in the bar. The bottom number indicates that these beats are quarter notes.

In music with four beats per bar, the first beat is normally a little stronger than the others. The third beat is also stronger, but not as strong as the first beat. Try counting the following out loud, tapping your foot at the same time, to get the feeling of the four beats:

In 2/4 music, there are two quarter-note beats in each bar. Music with two beats per bar tends to have a driving rhythm: strong-weak, strong-weak.



In 3/4, or waltz, time there are three quarter-note beats per bar. The first beat in each bar is the strongest. The next two beats are weak. This gives the distinctive waltz rhythm: one-two-three, one-two-three (strong-weak-weak, strong-weak-weak).

Look at the drawings that show how to conduct time in the "Leading a Group" section. Which motion is used for 2/4 time? For 3/4 time? For 4/4 time?

A *bar,* or measure, is a way of dividing music into smaller "compartments" containing a few beats.

The symbol C is often substituted for the 4/4 time signature.

Notation

You probably know that written music is called *notation* and is written on a five-lined staff. A composer can indicate much more on this staff than the notes to be played. As you compose, remember the following important points.

All music is made of two things: sound and silence. Sound has the following qualities: *pitch* (the height or depth of the sound), *timbre* (tone quality), *duration* (length), and *dynamics* (loudness and softness). Music is linked to time and has movement; one sound leads to the next. By organizing the sounds through rhythm and tempo, a composer creates an original piece of music.

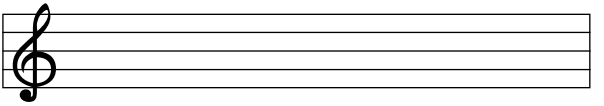
A composer indicates the qualities of sound and movement when writing a composition. Some of the qualities, such as rhythm, pitch, and time, will appear as notation on the staff. Others appear as written directions, such as "presto" (fast) or "fortissimo" (very loud).

Your composition of 12 measures or more, which you should write for your own instrument or voice, must include these basic elements: (1) a staff, (2) a treble or bass clef sign, (3) the key signature, (4) the time signature, and (5) the correct time value in each measure of the score. (See the illustrations that follow.) Give your composition a title that fits the mood or spirit of the music. Add any written directions you need to indicate tempo and expression, and there it is: an original composition of your musical ideas, written down to keep.

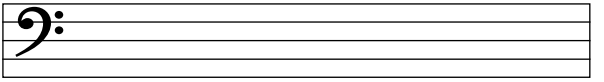
Clefs indicate the pitch of the notes written on the staff.

The *treble* clef shows music for the higher (soprano and alto) voices and instruments, the guitar, or the right hand on keyboard instruments.

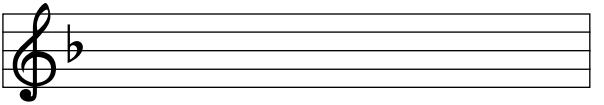
The *bass* clef shows music for the lower (tenor and bass) voices and instruments, or the left hand on keyboard instruments.



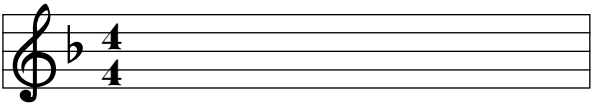
Treble clef and staff



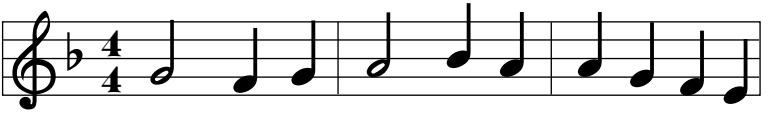
Bass clef and staff



Key signature



Time signature



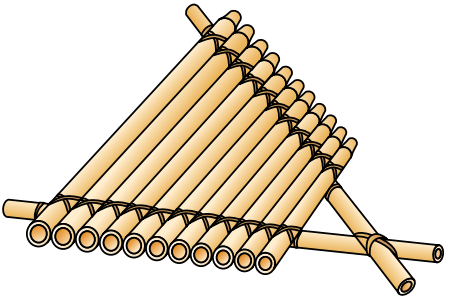
Correct time value in each measure of score

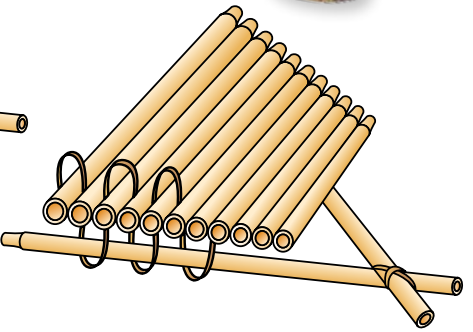
Traditional Instruments

All over the world, people sing and dance to the music of instruments they make themselves from materials at hand.

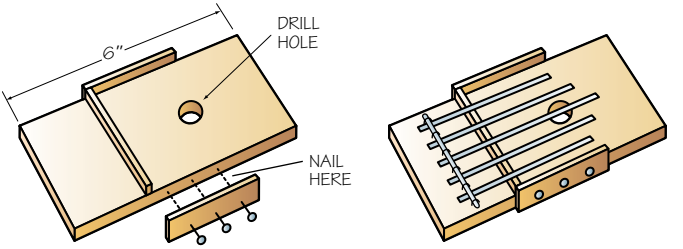
For optional requirement 4(c), you may make one of the instruments shown here or an instrument of your own choice. However, it must be an instrument actually used in a specific culture. Your own cultural heritage or ethnic background might give you ideas. Or, look in your local museum for native instruments from your area. Visit the library to find ideas from around the world. You may want to refer to the books about making musical instruments that are listed in the resources section of this pamphlet.

You should be able to tell who used the kind of instrument you made, on what occasions the instrument was played, and what materials were used to make it.

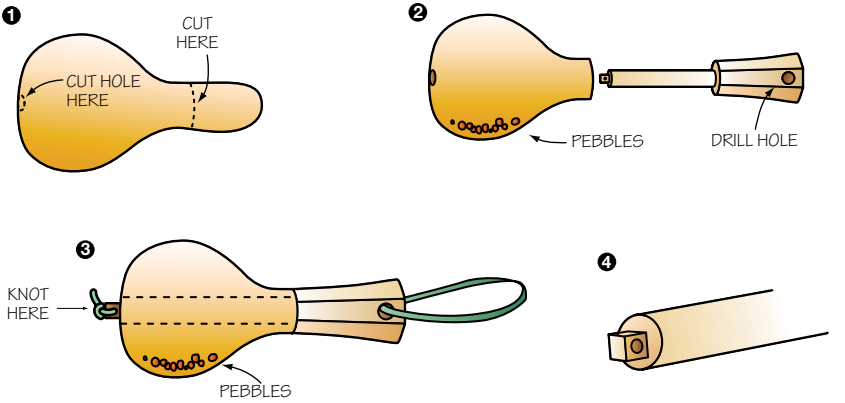




Bamboo xylophone—Southeast Asia. Use pencil-thin sections of hollow bamboo. Sand both ends of each bamboo section. Arrange the sections in scale order, then bind them into place. To play, strike the bamboo with a small wooden or hard-rubber mallet.

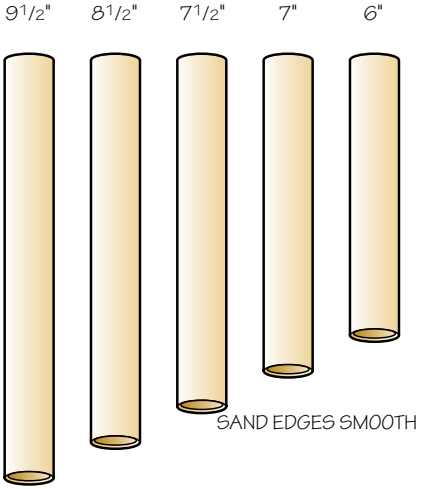


Sansa (thumb piano)—Africa. Make a wooden box 6 or more inches long. Drill a hole in the box lid. Attach a thin wooden crosspiece to the lid to make a ridge or fret. Arrange five thin springy strips of metal in order of length (as shown). Fasten one end of each metal strip to the lid. To play, hold the sansa on your lap with the keys (the free ends of the strips) pointing toward you, and use your thumbs or forefingers to pluck the keys.

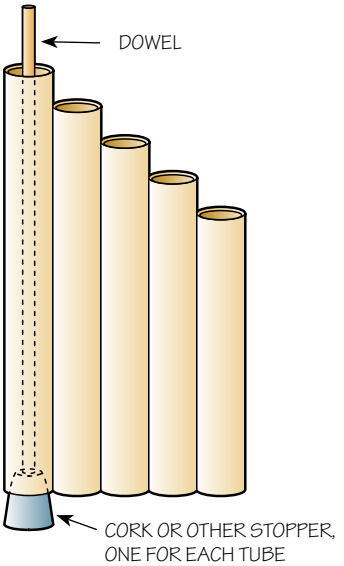


Gourd rattle—North America. Cut a gourd at its narrow end and clean it out. Let the inside of the gourd dry. Insert pebbles. Make a handle to fit inside the narrow end of the gourd. Push the handle into place and knot the tie as shown. Play by shaking.

Panpipes—used in many cultures. With a hacksaw, cut a 3 1/2-foot length of 1/2-inch PVC tubing into five pieces of stepped lengths, as shown. Sand the cut edges smooth. Align the top ends of the tubes. Use masking or duct tape to hold the pipes together. Close the bottom of each tube with a cork, wad of plastic wrap, or lump of modeling clay. With the help of your music teacher or other knowledgeable musician, tune the tubes to G, A, B, D, E. (Pushing the stoppers in raises the pitch; pushing them out with a dowel or other stick lowers the pitch.)



To play, hold the pipes so that the longest tube is on your left. Blow forcefully across the open end of a tube, the way you would blow across the top of a bottle. Give each note a definite beginning by saying "Du" or "Tu." The sound will be breathy. Practice blowing across each tube in scale order. Then try jumping from note to note. Can you play a simple tune like "Mary Had a Little Lamb"?



Cataloging

Have you discovered the fun of starting your own music library? With a collection of your favorite music and artists, you can hear them perform as often and as long as you wish.

Classifying Your Collection

Classify (organize) your recordings in a way that suits you, but keep your system simple and flexible.

You can classify recordings in several ways:

- In chronological order of the periods during which the music was written
- In alphabetical order, by names of performers, composers, or titles
- By category—classical, folk, jazz, country, rock, etc.
- In numerical order, by catalog numbers
- In combinations of these or according to your own numbering system

Indexing Your Collection

As your collection grows, you might want a permanent list or catalog so you will know what you have and where to look for a recording. Your catalog can be a simple listing in a notebook or record book with alphabetical index tabs.

Many collectors use a system of 3-by-5-inch cards. This system makes it easy to cross-index, or list certain recordings more than one way.

Suppose, for example, you are indexing a recording of George Gershwin's *Rhapsody in Blue,* played by the pianist Oscar Levant and the Philadelphia Orchestra, and conducted by Eugene Ormandy. You can make separate cards and file them according to (1) the title, (2) the composer, (3) the

As a rule, put classifying marks on albums, cases, or envelopes, not on the records, cassettes, or discs themselves.

performing artist, (4) the conductor, and (5) the orchestra. (See the samples that follow.)

In the upper-right corner of each card, write any classifying mark or number you need to indicate the record's location in your collection.

You also can catalog your collection using a database or spreadsheet program on your computer. The software makes it easy to add and locate the recordings of any composer, performer, orchestra, etc.

CD 4

RHAPSODY IN BLUE

George Gershwin (composer)
Oscar Levant (pianist)
The Philadelphia Orchestra
Eugene Ormandy (conductor)

Columbia CD D-104026

CD 4

GERSHWIN, GEORGE (composer)

"Rhapsody in Blue"
Oscar Levant (pianist)
The Philadelphia Orchestra
Eugene Ormandy (conductor)

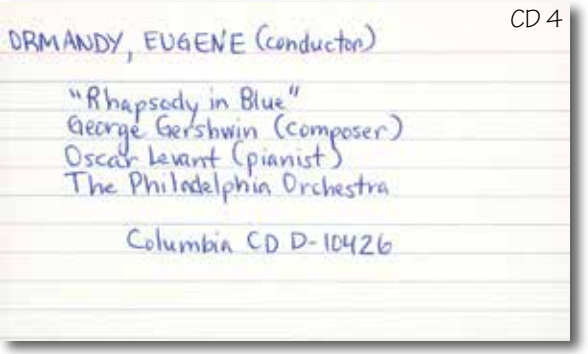
Columbia CD D-104026

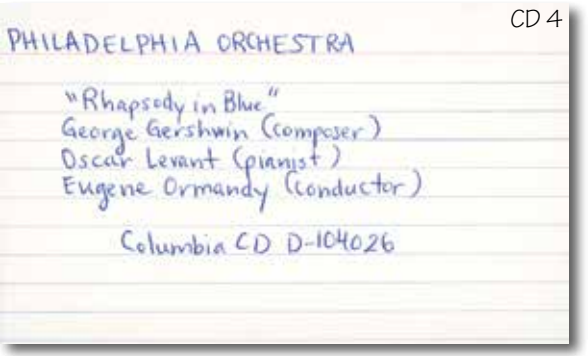
CD 4

LEVANT, OSCAR (pianist)

"Rhapsody in Blue"
George Gershwin (composer)
The Philadelphia Orchestra
Eugene Ormandy (conductor)

Columbia CD D-104026





Most of us will not make five separate cards for each CD, tape, or record. You might have some recordings, though, for which you will want to make two or three cross-references.

The great thing about digital music is that it requires no care or maintenance to preserve sound quality. Digital media players have no moving parts to clean, and the software used to manage digital music collections makes organizing easy. You need only take care that your digital files are for your personal use only.

Caring for Recordings

It makes sense to take care of your recordings so the sound quality stays crisp and clear. Whether your equipment is a handheld CD player or a room-size music system, for your own collection or your family's, here are tips on caring for recordings.

Caring for Compact Discs (CDs) and Players

1. Handle CDs carefully by the edges.
2. After playing, store each CD in its protective plastic case. CDs can be stored horizontally or vertically in storage units.
3. A carrying case is good for organizing CDs as well as for transporting them.
4. Wipe carefully handled CDs with a soft cloth, stroking from the center to the rim. If a CD has been soiled, you can clean it gently with soap and water.
5. Place a CD player on a level surface, away from dampness, high humidity, and extreme heat. Protect it from strong vibrations or jolting.
6. CD players ordinarily need no maintenance. If the player malfunctions, consult your dealer or a repair shop. Repair requires a trained technician and specialized tools.

Caring for Tapes and Tape Players

1. Clean and demagnetize the tape heads after at least every 20 hours of use to remove tiny particles that tapes leave behind. Do this especially before you plan to record an important program or play a valuable tape. Use cotton swabs soaked with denatured, not isopropyl (rubbing), alcohol. You can buy denatured alcohol or a special cleaning solution from an electronics or music store. Allow the heads to dry for 30 minutes before inserting a tape.
2. After you have cleaned the heads, use the swabs to clean the metal guides along the tape path.
3. To avoid erasing a cassette tape by accident, remove the small plastic tabs on the back of the cassette. Use a small screwdriver to pry out the tabs. Commercially recorded tapes already have the tabs removed.

Handling Records

1. Handle records by the edges. Avoid touching the grooved surfaces. Use a soft brush or cloth to keep them free of dust, making strokes in a circular direction along the grooves.
2. When you play records manually, lower the tone arm onto the record gently. A bumpy landing can scratch and injure the record and damage the needle.
3. Be sure the needle (stylus) is in good condition at all times. A worn needle can ruin your records. Replace diamond needles after every 1,000 hours of play.
4. Discard records that are cracked or full of nicks. They can damage the needle.

Storage

Store record albums in an upright position and fit snugly against each other. Flat or slanted storage will cause records to warp. Store tapes and CDs in a cabinet or case that protects them from dust and allows you to keep them organized and safe.

BUGLING

The Bugle

What would summer camp be without the bugle sounding "Reveille" in the morning and "Taps" in the evening? Camp and the bugle go together.

The basic technique is the same as that used to play other brass instruments, but the bugle is a simpler instrument. By varying the embouchure and the air speed through the instrument, a bugle player produces a set of notes called *harmonics.* All bugle calls are composed of these harmonics.

The *embouchure* is the shape, position, and adjustment of the lips, teeth, and tongue to the mouthpiece of the instrument.

The bugle, with no valves at all, is an excellent introduction to brass instruments.

The bugle is an ideal instrument for the beginning musician because most of the music uses only four notes. The ability to read music is not necessary, because the tunes are familiar and you can play by ear. Also, the bugle is inexpensive.

A pair of long, straight bugles was found in the tomb of King Tutankhamun, which indicates these instruments were used in Egypt more than 3,000 years ago.

The trumpet, trombone, French horn, and tuba use valves or a slide to vary the length of the tube and produce the notes between the harmonics. The trumpet, for example, has three valves that vary the length of the horn, allowing for eight possible combinations. In effect, the trumpet player plays a great many bugles with the ability to quickly change from one to another.

History

The bugle is an ancient instrument used in many civilizations. Many early bugles were made from sheep and goat horns and elephant tusks. The Romans used the bugle for pageantry and military purposes. They were the first to develop techniques for tube bending, which allowed them to make more compact instruments.

Playing Technique

As you learn to play the bugle, it helps if you understand how the various sounds are made. The natural (or *fundamental*) note of the instrument is determined by the length of the tube and whether the tubing is the same diameter all the way through or increases continuously, like a cone.

You do not have to blow a lot of air through a bugle because the sound is made by getting your lips to vibrate much like a rapidly opening and closing valve. Your blowing technique varies the vibrations in the tube and produces different notes. This has the same effect as changing the length of the tube. For example, if you play a note and then adjust your lips to play the same note an octave (eight whole tones) higher, the higher note is the same as playing a bugle that has had its length cut in half.

Stand straight as you play. Position the mouthpiece to your lips with one-third on the upper lip and two-thirds on the lower lip. Press your lips together tightly and blow into the mouthpiece. (Without the bugle, this should make a buzzing sound.) To make a higher note, accelerate the airflow, using the lip muscles to close the lip aperture (opening) while at the same time contracting the diaphragm (the muscle between your chest and stomach).

Also, raise the tongue inside the mouth (think “eeee” instead of “oooo”). This increases the air speed and makes

higher notes easier to play. (Do not pull the instrument tighter to your face as you play high notes.)

To play lower notes, loosen your lips. Drop the jaw and lower the tongue. This slows the air and makes lower notes resonate more.

You create a fuller, warmer sound when your throat is wide open and relaxed—as if you are fogging a mirror. If you blow hard and fast with tense muscles, as if you are trying to blow out a candle, you produce a thin, edgy sound.

Anyone who teaches trumpet, cornet, or trombone can help you learn to play the bugle. Perhaps you can arrange a few sessions to get started.

Be sure to hold the bugle horizontally. A downward angle will interfere with your breathing. Also, take deep breaths so you will have plenty of air.

Warming Up

The warm-up is the most important part of a practice session. The two main parts of a warm-up are *long tones* and lip *flexibilities.*

Long tones get the air flowing and the lips buzzing. To start, take a full breath and play a mid-range note. Hold it with a steady tone and constant airflow. When you run out of air, inhale fully and replay the same note. Stay relaxed—do not strain. After a few long tones, go on to lip flexibilities.

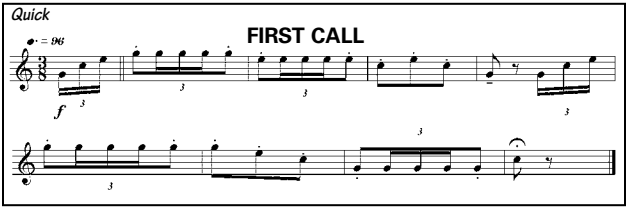
Flexibilities are lip slurs. They help the lips become more limber and help develop range. Slowly slur from your first note (C in the third space of the staff) down to the next harmonic (G on the second line) and back again. As you slur to a higher note, use faster air. Hold the last note until your breath is gone. Then inhale fully and repeat the exercise, following the scale downward.

If you are warming up on a trumpet, repeat the slur exercises using different valve combinations in order (that is, first with no valves, then with the second valve down, and so on).

Care of the Bugle

The musical quality of the bugle comes from its basic shape. Any dents or buildup of dirt in the tube will reduce the tone quality and ease of playing. One easy cleaning method is to pour cold water inside to wash out dust and saliva. Be sure the bugle is dry before storing it. It is also a good idea to store the bugle in a bag when it is not in use, to keep out dust.

Bugle Calls



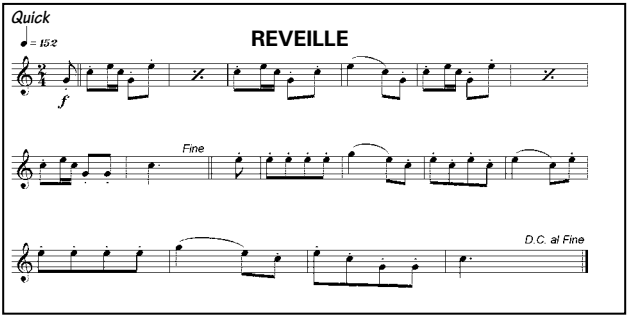
"First Call" is used for getting attention. It is commonly heard at horse races.

A note sign with a number placed at the beginning of written music indicates a specific tempo: the number of beats per minute. For example, ♩ = 72 tells the bugler to play at a speed of 72 quarter-note beats per minute.

A dotted quarter note ♩. lasts a beat and a half.

To fulfill Bugling requirement 3, you do not need to be so precise. Just play the calls at *quick, moderate,* or *slow* tempos, as indicated on the music.

"Reveille" is the morning wake-up call.



Composing Your Own Bugle Call

To help you fulfill requirement 2(b) to compose an original bugle call, here are some tips from Jeff Weir, director of the U.S. Naval Academy Drum and Bugle Corps.

Because bugle calls were meant to sound orders over great distances, they should be played at a solid forte (loud) volume, with good breath support. Take in enough air to play an entire phrase on one breath.

The tempo, phrasing, and articulation of the bugle call should reflect the order you are trying to give. For example, "Reveille" wakes people up, so it is fast, lively, and played staccato. "Taps," on the other hand, is slow, soothing, and played legato. Be precise with your articulation and phrasing because muddy playing could confuse the order you are trying to convey.

Whenever you play a bugle call for your unit, make it sound exactly the same every time you play it. The recognizability of the bugle calls is what makes them effective ways to give orders. If your bugle calls were played differently every time, how would your unit know whether you wanted them to charge or go to sleep?

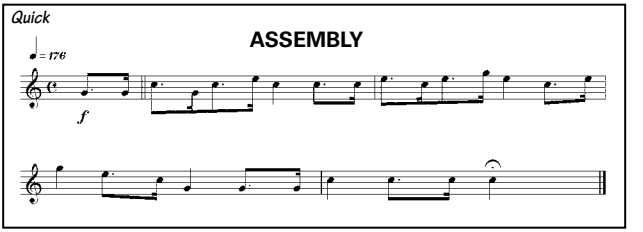
Try to make your new bugle call balanced with two phrases of equal length. Here is a hint to compose your own original bugle call: To make your bugle call sound more musical, have your first phrase end on G and your second phrase end on C. In music, those two points are called cadences. The phrase that ends on G will sound like the middle of your song because it ends on a half cadence. The second phrase that ends on C will definitely sound like the end of your piece because it ends with an authentic cadence.

When sounding an order on a bugle, the entire bugle call is usually repeated to make sure the Scouts have heard and understood the order.

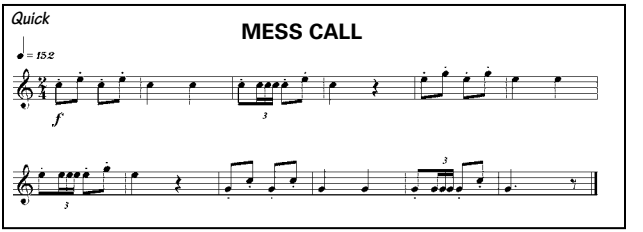
—Jeff Weir

Articulation refers to the way notes are connected. On written music, a curved line over or under notes means the notes should be connected smoothly. This style of playing is called *legato.* A dot over or under notes means they should be played as short notes with brief silences between them. This type of articulation is *staccato.*

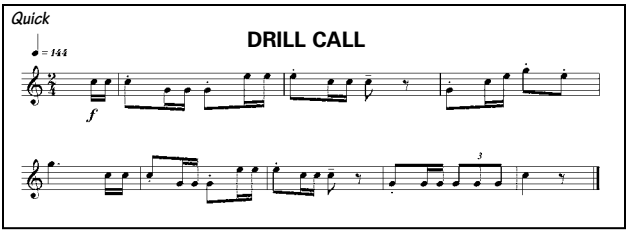
The 4/4 time signature is often indicated by the symbol C, as shown for "Assembly."



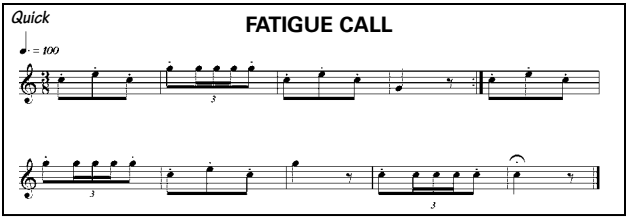
"Assembly" signals everyone to gather at a designated place. Some refer to this as "Fall In."



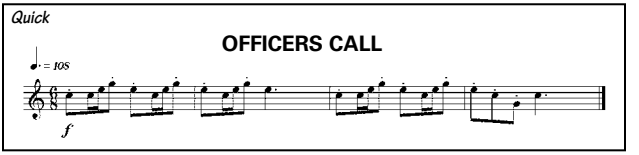
"Mess" signals mealtime. This call is very popular!



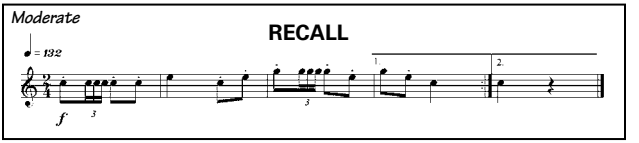
"Drill" is a call first heard in military days. It is best avoided unless your troop has agreed on what it signals. For example, it could be used for camp cleanup or to report for some camp activity.



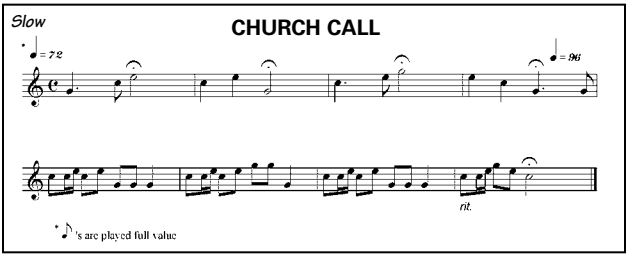
"Fatigue" summons those who are to report for some type of work activity. Because it is rarely heard, its message might not be recognized unless your troop knows it well.



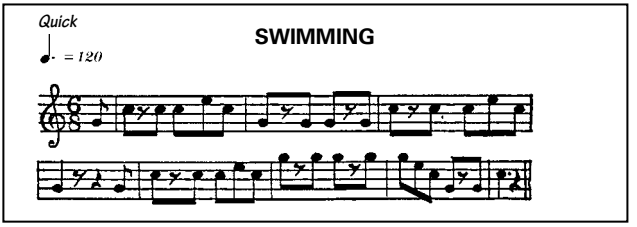
"Officers" would be played for a meeting of the troop leaders. It is unfamiliar to most troops and you probably will not use it.



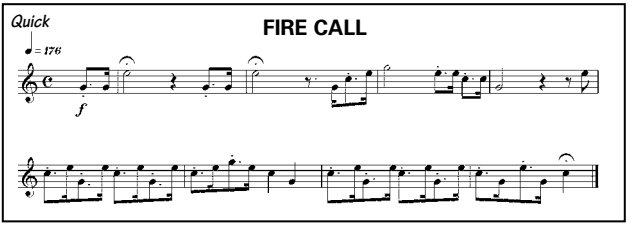
"Recall" signals an end to something that is under way. For example, a game of Capture the Flag when everyone is scattered far and wide. "Assembly" also could be used.



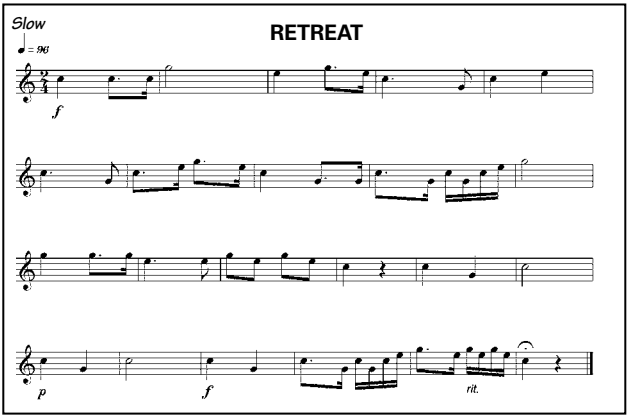
"Church" announces that services are about to begin.



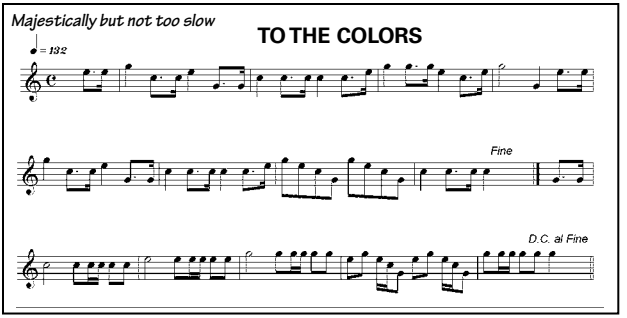
"Swimming" signals the swimming period.



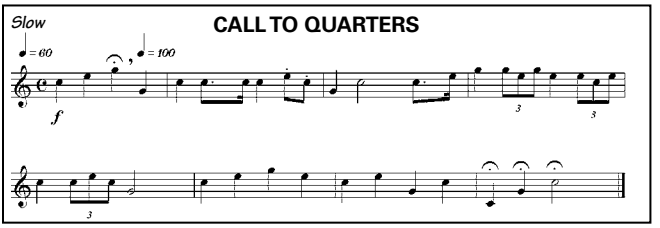
"Fire" is an alarm that signals danger. This call is unique and will get almost anyone's attention.



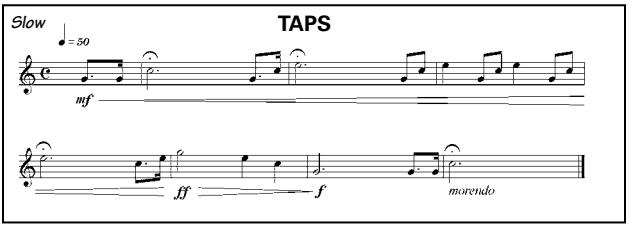
"Retreat" signals the end of the official day. It usually is played just before "To the Colors" or the national anthem, which are played during the lowering of the flag.



"To the Colors" is played while the flag is raised and lowered.



"Call to Quarters" signals everyone to get ready for bed. "Taps" follows this call, at which time lights are turned off for sleeping.



"Taps" signals the end of the day, when everyone is to go to sleep. It is also played at funerals.

Music and Bugling Resources

With your parent or guardian's permission, visit Scouting America's official retail site, **scoutshop.org**, for a complete list of merit badge pamphlets and other helpful Scouting materials and supplies.

Books

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Wyatt, Keith, and Carl Schroeder. *Hal Leonard Pocket Music Theory: A Comprehensive and Convenient Source for All Musicians.* Hal Leonard, 2002.

Zinsser, William Knowlton. *Easy to Remember: The Great American Songwriters and Their Songs*. David R. Godine, 2000.

Websites and Organizations

Barbershop Harmony Society
barbershop.org

The Blues Foundation
blues.org

Bugle Calls
venture190.tripod.com/bugle.html

Classical Music Archives
classicalarchives.com

Country Music Association
cmaworld.com

Drum Corps International
dci.org

International Bluegrass Music Association
ibma.org

Red Hot Jazz Archive
redhotjazz.com

Rock and Roll Hall of Fame and Museum
rockhall.com

Smithsonian Music
music.si.edu

U.S. Naval Academy Drum and Bugle Corps
usna.edu/usnadb

Acknowledgments

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MERIT BADGE LIBRARY

Though intended as an aid to youth in Scouts BSA and qualified Venturers and Sea Scouts in meeting merit badge requirements, Scouting America's merit badge pamphlets are of general interest and are made available by many schools and public libraries.

Always check scouting.org for the latest merit badge requirements. If a Scout has already started working on a merit badge when new requirements for that merit badge are introduced, *they may continue to use the same pamphlet to earn the badge and fulfill the requirements therein.* In other words, the Scout need not start over again with the revised requirements.

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