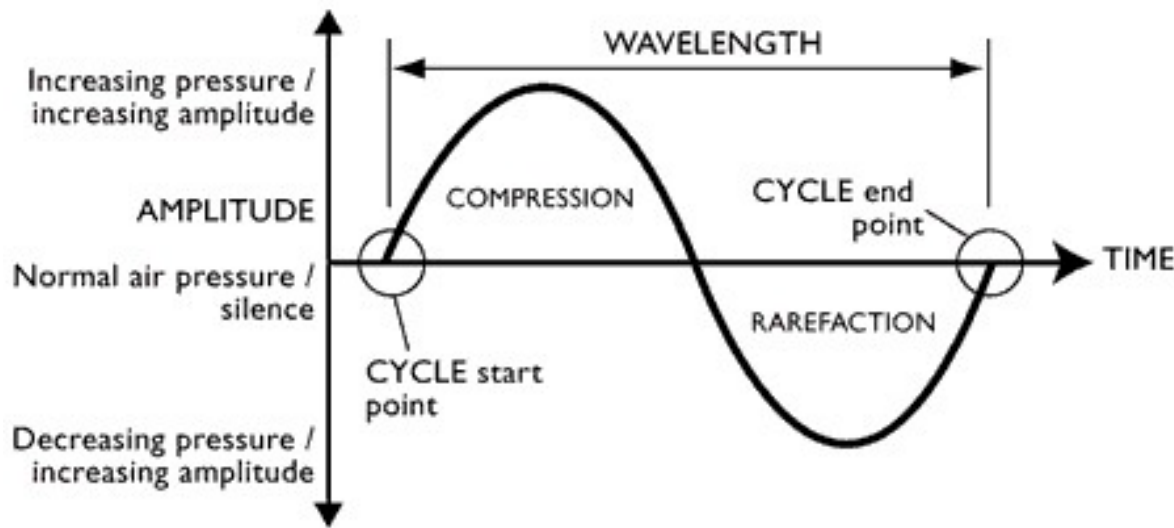


Music Theory Introduction

_____ and _____ are the basic materials from which music is made. In music, time is organized into patterns of _____. Sound consists of several characteristics, each of which contributes in its own way to the music. _____ is the scientific study of sound. The source of sound is a _____ object. Any object that can be made to vibrate will produce sound. Vibrating objects that are familiar to musicians include strings, wind, brass and percussion instruments. A vibrating object generates energy that is transmitted to the ear by vibrational disturbances called _____. These waves are transmitted as alternate compressions and rarefactions of the molecules in the atmosphere. Sound waves transmit energy from the vibrating object to the _____.





One complete oscillation both above and below the central axis is called a _____.

Sounds are perceived subjectively as being relatively “high” or “low.” This property of sound is called

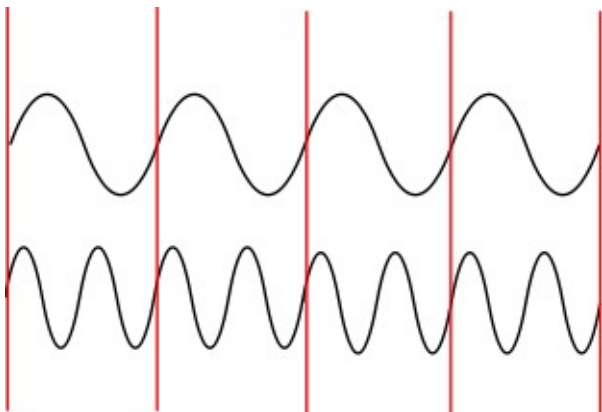
_____. The speed at which an object vibrates is affected by its physical nature, including its size,

shape, and material. The faster the vibrating object vibrates, the “higher” the pitch. Conversely, the slower the vibrating body

vibrates, the lower the pitch. Therefore, the _____ of vibration determines the pitch of the sound.

Frequency of vibration may be expressed as the number of cycles per second. Musicians are familiar with the standard of A = 440.

This means that the note A (above middle C) vibrates at 440 cycles per second. We use the term hertz (abbreviated HZ) as the label to describe cycles per second.



When the frequency or HZ of a pitch is doubled, the resulting tone will be an

_____ higher. When the frequency or HZ of a pitch is halved,

the resulting tone will be an _____ lower.

In addition to pitch, music makes use of various degrees of “loudness” or “softness” of sound. This property of sound is called

_____. Intensity is determined by the amount of energy transmitted from the sound source to

the ear and is measured by the _____ of the sound wave. Sound waves can be compared to

waves on the surface of water. The greater the agitation, the higher the waves. Assuming no interference from absorbing or

reflecting surfaces, sound travels outwards in all directions from the source. The intensity, however, decreases inversely as the

square of the distance. Ordinarily, the closer one is to the sound source, the _____ the sound

will be.

Tones produced by various sound sources have their own distinctive tone quality. This property of sound is called

_____. In addition to pitch and intensity, timbre is transmitted to the ear by sound waves.

Sounds from different sources vary in quality because most sounds are not a single pitch, but consist of a complex of pitches called

_____. These pitches are the result of the sound source vibrating not only in its entire

length, but also in $1/2$, $1/3$, $1/4$, etc. of its length. The result is a

complex sound wave that transmits all of the frequencies produced

by the source. The number, distribution, and relative intensity of

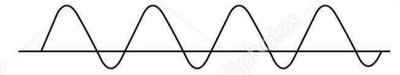
the harmonics contained in a sound are chiefly responsible for its

timbre.

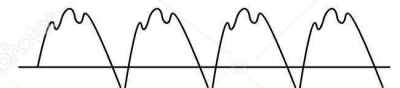
TIMBRE



Tuning fork



Flute



Voice



Guitar



Since time is one of the basic building blocks of music, the _____ of sound is an important factor.

Duration is the property of sound that refers to the “length” of tones. In music, the duration of sounds is a vital concern. Patterns of duration create the element of music called _____.

Music can be considered a type of _____, and to a lot of people a foreign one at that.

It has its own alphabet and sentence structure and set of rules that govern how to put it all together and “conjugate” the sounds.

Music has created a system of writing called _____. This allows us to organize and inform

people how to create sounds that are high and low, in patterns of different rhythms and durations, and in various intensities in a

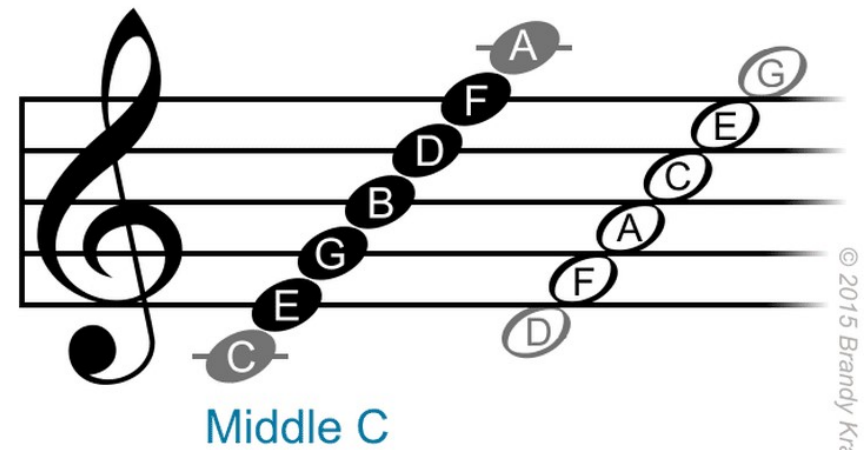
concise and readable manner. It has evolved over many thousands of years into

a standardized system with _____.

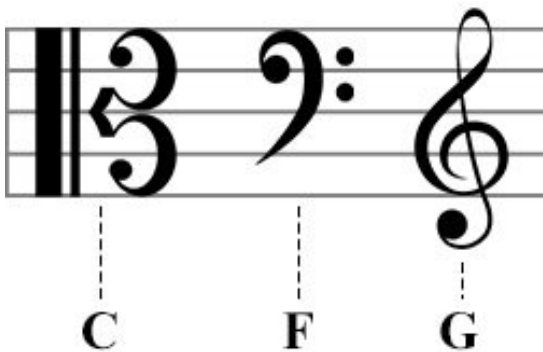


Musical Notation

Five parallel horizontal lines with intervening spaces are used to notate the pitch of tones. This device is called a _____.



The written symbols which represent tones are called _____. Tones can be heard, whereas notes can only be seen. The first seven letters of the alphabet (A through G) are used to name the notes which are placed on the various lines and spaces of the staff. Signs are placed at the left on the staff to identify a particular line. These signs are called _____.



Although many different types of clefs have been used throughout the history of musical notation, modern notation generally focuses on the G (treble) clef, F (bass) clef, and C (tenor/alto) clef. The different clefs are used to make music easily readable dependent upon the range of pitches being used to avoid the use of unnecessary ledger lines.



The treble and bass clefs can be combined to create the _____.

The grand staff is used for the notation of piano music and is useful for other purposes, since it is capable

of representing the full range of virtually all musical media. Create a grand staff by combining two staves (one using a treble clef

and a second using a bass clef) joined by a vertical line and a brace at the left. A note placed on the first ledger line above the bass

staff represents the same pitch as a note placed on the first ledger line below the treble staff. This note is called

_____. It derives its name from the fact that it's located in the middle

of the grand staff.

In the beginning of music, times were simpler. There was no harmony, everyone sang or

played a unison line of music. Notation was a breeze as there wasn't much to control. When

a piece of music is totally unison in all ways, it's called homophonic. The only thing we

needed to write was the distance between pitches, called an _____.



The smallest type of interval used in western tonal music is the _____.



Two half-steps combine to make a whole-step. When you place notes alphabetically in

sequence on a staff, each note visually appears to be equidistant from the preceding or following note. In this way, a staff is

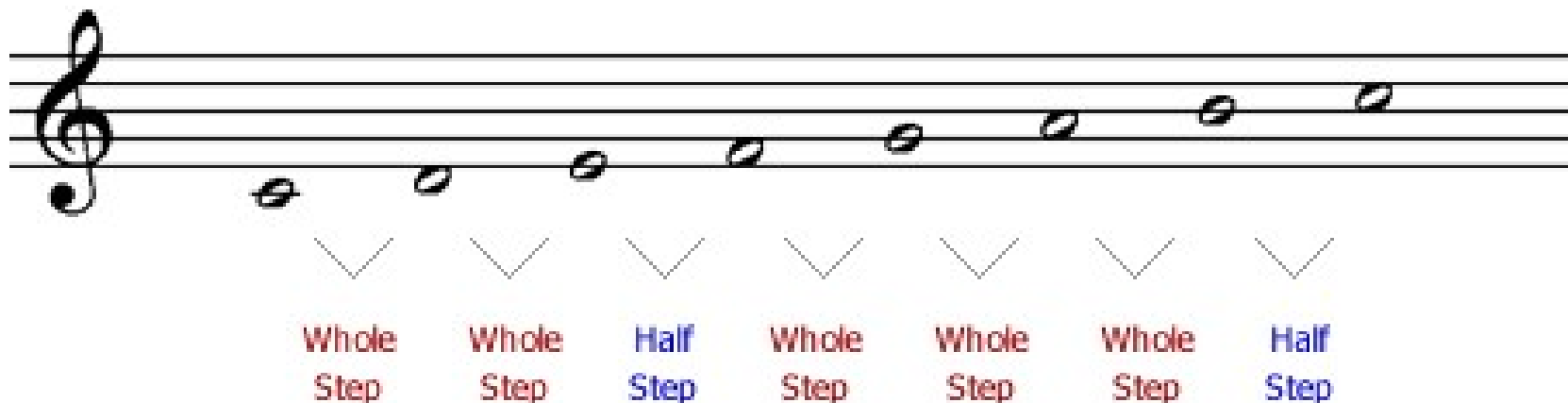
deceptive. Take a look at your piano keyboard page. Half steps are found between the notes E and F and also between B and C. All

other adjacent notes are a whole-step from one another. Yet, visually on the written staff, the intervals between all notes are the

same size. A _____ is the movement from one pitch to the same pitch an octave away. For

example, a C major scale would be written as follows (C, D, E, F, G, A, B, C): Notice the pattern of the intervals between each note in

the scale.



A major scale is always made up of the same pattern of intervals: Whole, Whole, Half, Whole, Whole, Whole, Half. Knowing that, you can create a scale beginning on any pitch letter and figure out how to create a major scale. In order to get the correct intervals when starting on a pitch letter other than C, you may need to utilize _____.

Accidentals are signs/symbols that are attached to notes which alter their pitch. When writing an accidental, the symbol always

Accidental	Symbol	Function
Sharp	#	Raises note one half-step
Flat	b	Lowers note one half-step
Natural	♮	Cancels an accidental
Double Sharp	𝄌	Raises note one whole-step
Double Flat	𝄂	Lowers note one whole-step

goes just in front of the note being altered.



Accidentals are needed to keep the patterns of intervals correct when writing a major scale. For instance, look at the following

example of a G major scale:

G major scale

G A B C D E F# G

Whole Step Whole Step Half Step Whole Step Whole Step Whole Step Half Step

Here's where music theory all starts to come together. You can see to write a G major scale, you need to employ one accidental; a sharp on the F. Therefore, we say that the key of G has one sharp, and that sharp is F.

Look at the following example of an F major scale. It uses one accidental, a flat on the B. I bet you can guess what the key of F has

F major scale

F G A B \flat C D E F

in it's key! That's right, the key of F major has one flat.