Music Theory Overview

There are 12 tones (notes) used in Western music. 7 of these notes are given alphabetical labels (A, B, C, D, E, F, G). The in-between notes are referred to by using an adjacent labeled note and a sharp(#) or flat(b) symbol. So the full scale of notes can be denoted as follows:

A A# B C C# D D# E F F# G G# *or*
A Bb B C Db D Eb E F Gb G Ab

These notes repeat. In other words the tone past G#/Ab is another A. The A at the end is twice the frequency as the A at the beginning. The span of 8 labeled notes is called an **Octave**. If you were to go up another octave, the third A would be double the frequency of the second A, so four times the frequency of the first A, etc…

A piano has 88 keys, which means is spans 7 1/4 octaves. The white keys are the labeled or “whole” notes, and the black keys are the sharps/flats.

A guitar has 6 strings, each tuned to a different note, and a fret board with between 15 and 21 frets. So by starting on any open string and then sequentially pressing down on each fret up the neck, you can play a little over an octave’s worth of notes. The lowest note that can be played is an E with the frequency of 82 Hz, by plucking the fattest (6^{th}) string.

Obviously it would be very difficult to play anything by moving up and down 12 or more frets on one string. Usually the left hand stays in or at least near one position on the neck. Beginners typically use first position and use the first four frets to play notes and chords. First position is good for playing notes and most chords in the keys of C and G. You have a range of a little over two octaves in any position without moving your hands.

Scales and Keys

A musical scale is a consecutive series of notes that spans an octave, defined by a specific pattern of intervals (steps) between pitches. The scale is usually referred to by the note it starts on and a descriptor that indicates the pattern.

For example the C major scale starts on C and include the notes C, D, E, F, G, A. B.

The two most commonly used scale patterns are major and minor.

The key of a tune is the scale that the tune is based on. This does not necessarily mean that only the notes or chords in the specified scale are used.

The principal chords in a key are directly related to the key. For example, the principal chords in C are C, Dm, Em, F, G, Am, with C, F, and G being the most common.

Chords

A chord is a series of three or more notes played at the same time. Chord names are derived from the “root” note of the chord, and optionally modifiers specifying the relationship of the notes and so on.

A major chord is the first, third and fifth notes in the scale. For example C major is the notes C, E, G.
A minor chord is the first, flat third, and fifth note of the scale.
A seventh chord is the first, third, fifth, and flat seventh of the scale.

Since there are 6 strings on a guitar is is common to repeat some of the notes an octave apart.

There is a lot to chord theory. As a beginner, it is sufficient to know how to read chord charts and to memorize how to play basic chords. As you progress and start to really know the notes on the keyboard, and perhaps learn a little more music theory, you will begin to see patterns emerge and will eventually be able to figure out multiple ways to play a chord just knowing the chord name, and/or know what notes to play together that sound good, even if you don’t know what the name of the chord is.