

## Whole & Half Steps

These were demonstrated with stair steps in the diagram in the **Scales & Modes Lesson**. In that diagram, the stair steps represented “half steps” in musical terms.



Half steps are like the frets on the guitar. Each fret represents a half step interval between notes.

Whole steps are the like white keys on the piano that have a black key in between them. (Two half steps make up a whole step.) These are like the usual frets (except any half-frets) on a mountain dulcimer.

On the hammered dulcimer these are also like beginning on any marked course and playing the course just above it, starting on that course and playing the course just above it (on either side of the bridge or between the bridges), for example.

One of the reasons that it can be confusing to play familiar music on a guitar is that we have to skip so many frets because the music we know rarely uses all of the frets. This is what makes both kinds of dulcimers so accessible and appealing. We don't have to skip unnecessary frets or string courses to play the music we want to here.

If a player is familiar with the layout of a piano (or some other chromatic instrument) the lack of the “black keys” can make it challenging to find out

In order to understand which notes to use and omit, we'll need to learn about the names for the half steps that fit between the "white" notes.

Recall the musical alphabet for a moment. When played on a piano keyboard, using only the white notes this is the pattern that is played:

A BC D EF G A BC D EF G A BC

Notice there are no black keys between B and C, and between E and F.

The musical alphabet has only 7 names because it was created before the introduction of the "black" keys. When chromatic instruments and notation were being developed people decided to add a sharp or flat name to the "semi-tone" or half step between the notes. Each sharp also has a corresponding flat name. (Like your given name—the one your mother calls you when you are in trouble!—and various nicknames given by other family members of friends both refer to one person—you.)

Sharp names:

A# C# D# F# G# A# C# D# F# G# A#  
A | BC | D | EF | G | A | BC | D | EF | G | A | BC

Flat names:

Bb Db Eb Gb Ab Bb Db Eb Gb Ab Bb

(in this example, the lower case b = the flat sign) The sharp and flat names are called "enharmonic" equivalents of each other. This means that A# and Bb are two different ways of naming the exact same pitch.

Let's use this information to demonstrate whole and half steps. The interval (gap) between A and B is a whole-step, because it

includes both the half-step from a to A# and the half-step from A# to B (half+half=whole).

Likewise, the interval between G to F is a whole-step because it includes both the half-step from G to Gb and the half-step from Gb to F (half+half=whole).

However, the interval from B to C includes only the half-step from B to C. This is the same as E to F. This is also the same as from F# to G= half-step.

The Diatonic Scales (mentioned in Lesson 4) are always composed of 7 intervals: 5 whole-steps and 2 half-steps. (There will be more on this in later lessons.)

In contrast, Chromatic Scales are always composed of 12 intervals: all half-steps.

(Don't worry if this all doesn't make sense right now, sometimes like a tea-bag, I need to steep in the hot water in order to absorb it all!)